



# Bring It On!

Book 3: Fractions Worksheets

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Bring It On! Fractions Worksheets

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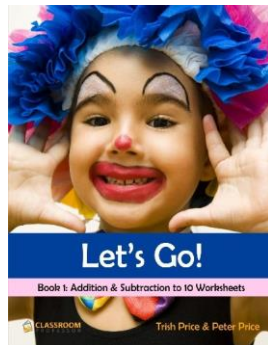


## Scope and Sequence – Developing Number Fluency “Times Tables”

	Addition & Subtraction to 10				Addition	Subtraction	Addition & Subtraction Revision		Addition	Subtraction	Addition & Subtraction	Easy Multiplication and Division	Extended Addition & Subtraction	Multiplication	Division	Multiplication and Division Revision	All Operations Revision	Extended Multiplication and Division	Division with Remainders	Factors & Multiples	Mental Strategies	All Operations Advanced Revision	Fractions	Percentages
Series	Let's Go!				Ten Minutes a Day Level 1				Ten Minutes a Day Level 2				Ten Minutes a Day Level 3				Bring It On!							
Gr 1/ Yr 2																								
Gr 2/ Yr 3																								
Gr 3/ Yr 4																								
Gr 4/ Yr 5																								
Gr 5/ Yr 6																								

## Developing Fluency Worksheets Series

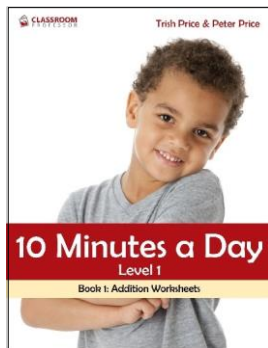
Grade 1 / Year 2



### **Four eBooks:**

- Addition & Subtraction to 10
- Addition
- Subtraction
- Addition & Subtraction Revision

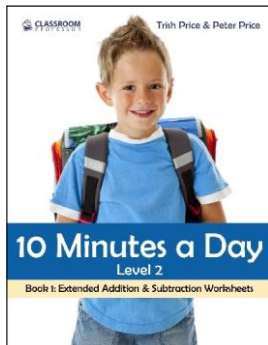
Grade 2 / Year 3



### **Four eBooks:**

- Addition
- Subtraction
- Addition & Subtraction Revision
- Easy Multiplication & Division

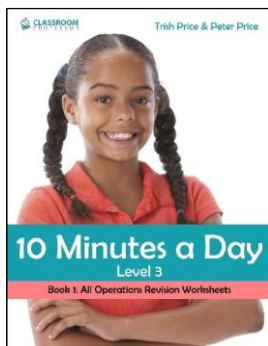
Grade 3 / Year 4



### **Four eBooks:**

- Extended Addition & Subtraction
- Multiplication
- Division
- Multiplication & Division Revision

Grade 4 / Year 5



### **Four eBooks:**

- All Operations Revision
- Extended Multiplication & Division
- Division with Remainders
- Factors & Multiples

Grade 5 / Year 6



### **Four eBooks:**

- Mental Strategies
- All Operations Advanced Revision
- Fractions
- Percentages

## Grade 5 / Year 6 eBooks series: Bring It On!

Each worksheets eBook contains:

- \* Daily worksheets for 10 weeks
- \* Carefully graded and sequenced activities
- \* Lots of revision activities
- \* 5 Checkup worksheets for assessment
- \* 20 Homework worksheets with parents' advice
- \* All answer keys
- \* PDF download for easy access
- \* Teaching strategies advice
- \* 30-day money-back guarantee



### *Mental Strategies:*

- Multiplying by 10, 100 or 1000
- Dividing by 10, 100 or 1000
- Doubling 2-digit & 3-digit nos
- Halving 2-digit & 3-digit nos
- Adding "nice" numbers
- Adding near 100
- Subtracting near 100
- Multiplying 2- & 3-digit nos x5
- Multiplying larger nos x50, x25
- Revision

### *All Operations Advanced Revision:*

- Count on/back; Double
- Difference of; 5x, 10x
- Rainbow facts; 3x
- Doubles+1; 4x
- Near 10; 9x
- Remaining & Ext. Facts; 6x
- Doubling 2-digit numbers; 8x
- Halving 2-digit numbers; 7x
- Adding "nice" numbers
- Multiplying / dividing by 10, 100, 1000

### *Fractions:*

- Multiplying by fractions
- Improper and mixed numbers
- Equivalent fractions
- Simplifying fractions - Comparing fractions
- Adding & subtracting fractions
- Adding & subtracting mixed nos
- Converting decimals & common fractions
- Advanced fractions to decimals
- Revision

### *Percentages:*

- Introduction to percentages
- Converting common fractions to percent
- 10%, 10% discount
- 50%, 50% discount
- 25%, 25% discount
- 100%+
- 10% increase, 50% increase
- 100% increase, 200+% increase
- 1%, 0.5%
- Advanced percentages
- Percentage Revision



*Contents: Bring It On! Fractions*

***Classroom Worksheets***

Multiplying by fractions.....	1[A] - 1[D]
Improper and mixed numbers .....	2[A] - 2[D]
Equivalent fractions.....	3[A] - 3[D]
Simplifying fractions .....	4[A] - 4[D]
Comparing fractions.....	5[A] - 5[D]
Adding fractions .....	6[A] - 6[B]
Adding & subtracting fractions.....	6[C] - 6[D]
Adding & subtracting mixed numbers.....	7[A] - 7[D]
Converting decimals to common fractions.....	8[A] - 8[B]
Converting common fractions to decimals.....	8[C] - 8[D]
Advanced fractions to decimals.....	9[A] - 9[D]
Revision .....	10[A] - 10[D]

***Check Up Worksheets***

Multiplying by Fractions; Improper and Mixed Numbers .....	Check Up A
Equivalent Fractions; Simplifying Fractions .....	Check Up B
Comparing Fractions; Adding and Subtracting Fractions.....	Check Up C
Advanced Common Fractions & Decimals .....	Check Up D

***Homework Worksheets***

Multiplying by fractions.....	1 HW
Improper and mixed numbers .....	2 HW
Equivalent fractions.....	3 HW
Simplifying fractions .....	4 HW
Comparing fractions.....	5 HW
Adding & subtractions fractions.....	6 HW
Adding & subtracting mixed numbers.....	7 HW
Converting decimals to common fractions.....	8 HW
Advanced fractions to decimals.....	9 HW
Revision .....	10HW

***Answer Keys***




Recommended eBook	Description
<div data-bbox="199 289 602 807" data-label="Image"> </div> <p><b>Bring It On! Series:</b></p> <ul style="list-style-type: none"> <li>• Mental Strategies</li> <li>• All Operations Advanced Revision</li> <li>• Fractions</li> <li>• Percentages</li> </ul>	<p>The <i>Bring It On!</i> series includes advanced worksheets which cover a range of topics, for students who have memorized all the number facts for the four operations. These eBooks may be used at a range of grade levels, starting in Grade 4.</p> <p><b>Book 1</b> of this series introduces students to a sequence of mental strategies which may be used in many contexts involving mental computation. For example, worksheets cover multiplying by powers of 10, doubling and halving 2- and 3-digit numbers, and adding and subtracting near 100.</p> <p><b>Book 2</b> is useful for students at this level to revise the four operations' number facts. This book should be used if students need to develop fluency with the basic facts, and will also introduce advanced facts involving larger numbers (e.g., <math>600 \times 3 = ?</math>; <math>2 \times 0.6 = ?</math>), and order of operations questions (e.g., <math>8 + 15 \div 5</math>).</p> <p><b>Book 3</b> covers a range of questions involving fractions, including finding equivalent fractions, converting common fractions to decimals, comparing fractions with like or unlike denominators, and adding and subtracting fractions with like denominators.</p> <p><b>Book 4</b> introduces students to percentages, and includes calculations involving converting common fractions to percentages, percentage discounts and increases, and percentages greater than 100% and less than 1%.</p>



Common Core State Standards for Mathematics		
<p><b>Grade 4 Number and Operations—Fractions</b></p> <p><b>Extend understanding of fraction equivalence and ordering.</b></p> <ul style="list-style-type: none"> <li>Compare two fractions with different numerators and different denominators.</li> <li>Record the results of comparisons with symbols <math>&gt;</math>, <math>=</math>, or <math>&lt;</math>.</li> </ul> <p><b>Build fractions from unit fractions by applying and extending previous understandings of operations on whole numbers.</b></p> <ul style="list-style-type: none"> <li>Add and subtract mixed numbers with like denominators.</li> </ul>	<p><b>Grade 5 Operations &amp; Algebraic Thinking</b></p> <p><b>Write and interpret numerical expressions</b></p> <ul style="list-style-type: none"> <li>Use parentheses, brackets, or braces in numerical expressions, and evaluate expressions with these symbols.</li> <li>Write simple expressions that record calculations with numbers, and interpret numerical expressions without evaluating them.</li> </ul> <p><b>Grade 5 Number and Operations—Fractions</b></p> <p><b>Use equivalent fractions as a strategy to add and subtract fractions</b></p> <ul style="list-style-type: none"> <li>Add and subtract fractions with unlike denominators (including mixed numbers) by replacing given fractions with equivalent fractions in such a way as to produce an equivalent sum or difference of fractions with like denominators.</li> </ul> <p><b>Grade 5 Number and Operations in Base Ten</b></p> <p><b>Understand the place value system</b></p> <ul style="list-style-type: none"> <li>Read, write, and compare decimals to thousandths.</li> </ul>	<p><b>Grade 6 Ratios and Proportional Relationships</b></p> <p><b>Understand ratio concepts and use ratio reasoning to solve problems</b></p> <ul style="list-style-type: none"> <li>Find a percent of a quantity as a rate per 100; solve problems involving finding the whole, given a part and the percent.</li> </ul>



## Alignment with the UK National Curriculum for Mathematics (draft 21 June 2012)

Recommended eBook	Description
 <p><b>Bring It On! Series:</b></p> <ul style="list-style-type: none"><li>• Mental Strategies</li><li>• All Operations Advanced Revision</li><li>• Fractions</li><li>• Percentages</li></ul>	<p>The <i>Bring It On!</i> series includes advanced worksheets which cover a range of topics, for students who have memorized all the number facts for the four operations. These eBooks may be used at a range of Year levels, starting in Year 4.</p> <p><b>Book 1</b> of this series introduces students to a sequence of mental strategies which may be used in many contexts involving mental computation. For example, worksheets cover multiplying by powers of 10, doubling and halving 2- and 3-digit numbers, and adding and subtracting near 100.</p> <p><b>Book 2</b> is useful for students at this level to revise the four operations' number facts. This book should be used if students need to develop fluency with the basic facts, and will also introduce advanced facts involving larger numbers (e.g., <math>600 \times 3 = ?</math>; <math>2 \times 0.6 = ?</math>), and order of operations questions (e.g., <math>8 + 15 \div 5</math>).</p> <p><b>Book 3</b> covers a range of questions involving fractions, including finding equivalent fractions, converting common fractions to decimals, comparing fractions with like or unlike denominators, and adding and subtracting fractions with like denominators.</p> <p><b>Book 4</b> introduces students to percentages, and includes calculations involving converting common fractions to percentages, percentage discounts and increases, and percentages greater than 100% and less than 1%.</p>







## Alignment with the UK National Curriculum for Mathematics (draft 21 June 2012)

<b>National Curriculum for Mathematics</b>	
<b>Year 4</b>	<b>Year 5</b>
<b>Fractions</b> Pupils should be taught to: <ul style="list-style-type: none"><li>• identify and name equivalent fractions of a given fraction with denominator not greater than 12</li><li>• write the equivalent fraction of a fraction given the denominator or the</li><li>• numerator</li><li>• reduce fractions to their simplest form</li><li>• add and subtract two fractions with common denominators within one whole</li></ul>	<b>Addition and subtraction</b> Pupils should be taught to: <ul style="list-style-type: none"><li>• add and subtract numbers mentally with increasingly large numbers.</li></ul> <b>Multiplication and division</b> Pupils should be taught to: <ul style="list-style-type: none"><li>• multiply and divide numbers by 10, 100 and 1000</li></ul> <b>Fractions</b> Pupils should be taught to: <ul style="list-style-type: none"><li>• compare and order fractions with different denominators</li><li>• recognise mixed numbers and improper fractions and convert from one form to the other</li><li>• add and subtract fractions with the same denominator and related fractions; write mathematical statements that exceed 1 as a mixed number.</li></ul>
<b>Decimals</b> Pupils should be taught to: <ul style="list-style-type: none"><li>• compare numbers with the same number of decimal places up to 2 decimal places</li><li>• find the effect of dividing a 2-digit number by 10 and 100, identifying the value of the digits in the answer as units, tenths and hundredths</li><li>• recognise and write decimal equivalents to <math>\frac{1}{4}</math>, <math>\frac{1}{2}</math>, <math>\frac{3}{4}</math> and any number of tenths and hundredths.</li></ul>	<b>Decimals</b> Pupils should be taught to: <ul style="list-style-type: none"><li>• read and write decimal numbers as fractions</li><li>• recognise and use thousandths and relate them to tenths, hundredths and 100 decimal equivalents</li></ul> <b>Percentage</b> Pupils should be taught to: <ul style="list-style-type: none"><li>• recognise the per cent symbol (%) and understand that per cent relates to “number of parts per hundred” for example that 100% represents a whole quantity and 1% is <math>\frac{1}{100}</math>, 50% is <math>\frac{50}{100}</math>, 25% is <math>\frac{25}{100}</math>, etc.</li><li>• write simple fractions as percentages and decimals as percentages (e.g. <math>\frac{1}{2} = 50\% = 0.5</math>).</li></ul>



## Bring It On! series: Alignment with the Australian Curriculum

eBook Series	Series Titles	Australian Curriculum: Content Descriptions
 <p>The eBook cover for 'Bring It On! Book 1: Mental Strategies Worksheets' features a young girl in a yellow shirt and black pants performing a handstand. The title 'Bring It On!' is in large orange letters, and 'Book 1: Mental Strategies Worksheets' is in smaller black letters below it. The authors 'Trish Price &amp; Peter Price' are listed at the top right.</p>	<p><b>Bring It On! Series:</b></p> <ul style="list-style-type: none"> <li>• Mental Strategies</li> <li>• All Operations Advanced Revision</li> <li>• Fractions</li> <li>• Percentages</li> </ul>	<p><b>Year 4</b></p> <ul style="list-style-type: none"> <li>• Investigate equivalent fractions used in contexts (ACMNA077)</li> <li>• Recognise that the place value system can be extended to tenths and hundredths. Make connections between fractions and decimal notation (ACMNA079)</li> </ul> <p><b>Year 5</b></p> <ul style="list-style-type: none"> <li>• Identify and describe factors and multiples of whole numbers and use them to solve problems (ACMNA098)</li> <li>• Compare and order common unit fractions and locate and represent them on a number line (ACMNA102)</li> <li>• Investigate strategies to solve problems involving addition and subtraction of fractions with the same denominator (ACMNA103)</li> <li>• Recognise that the place value system can be extended beyond hundredths (ACMNA104)</li> </ul> <p><b>Year 6</b></p> <ul style="list-style-type: none"> <li>• Identify and describe properties of prime, composite, square and triangular numbers (ACMNA122)</li> <li>• Select and apply efficient mental and written strategies and appropriate digital technologies to solve problems involving all four operations with whole numbers (ACMNA123)</li> <li>• Compare fractions with related denominators and locate and represent them on a number line (ACMNA125)</li> <li>• Solve problems involving addition and subtraction of fractions with the same or related denominators (ACMNA126)</li> <li>• Multiply and divide decimals by powers of 10 (ACMNA130)</li> </ul>

eBook Series	Series Titles	Australian Curriculum: Content Descriptions
 <p>[Continued]</p>	<p><b>Bring It On! Series:</b></p> <ul style="list-style-type: none"> <li>• Mental Strategies</li> <li>• All Operations</li> <li>• Advanced Revision</li> <li>• Fractions</li> <li>• Percentages</li> </ul>	<p><b>Year 6</b></p> <ul style="list-style-type: none"> <li>• Find a simple fraction of a quantity where the result is a whole number, with and without digital technologies (ACMNA127)</li> <li>• Make connections between equivalent fractions, decimals and percentages (ACMNA131)</li> <li>• Investigate and calculate percentage discounts of 10%, 25% and 50% on sale items, with and without digital technologies (ACMNA132)</li> </ul> <p><b>Year 7</b></p> <ul style="list-style-type: none"> <li>• Investigate index notation and represent whole numbers as products of powers of prime numbers (ACMNA149)</li> <li>• Compare fractions using equivalence. Locate and represent positive and negative fractions and mixed numbers on a number line (ACMNA152)</li> <li>• Express one quantity as a fraction of another, with and without the use of digital technologies (ACMNA155)</li> <li>• Connect fractions, decimals and percentages and carry out simple conversions (ACMNA157)</li> <li>• Find percentages of quantities and express one quantity as a percentage of another, with and without digital technologies. (ACMNA158)</li> </ul>

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# Teaching Strategies

## Teaching Strategies Fact Sheets

The Teaching Strategies Fact Sheets provide expert information for teachers about the recommended strategy-based approach to the teaching of arithmetic facts.

## Procedures with Fractions

### ***Difficulties in learning fractions***

Fractions is one of the most troublesome topics in the mathematics curriculum for primary, elementary and middle years students and their teachers. A number of reasons are probably behind this situation, including the number of different forms in which fractions may be recorded, the different thinking required to understand fractions when compared to whole numbers, and traditional methods of instruction, which have emphasised computational methods rather than understanding.

This eBook presents to students a range of key ideas around fractions, including key processes such as creating equivalent fractions and notational systems, including common fractions, decimal fractions, percentages and ratios.

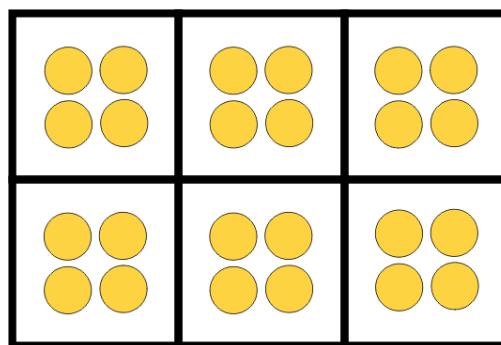
To be successful in these exercises, students first need to be confident and proficient in all basic number facts, including especially multiplication facts to  $10 \times 10$  and associated division facts.

### ***Multiplying by Fractions***

Multiplying a whole number by a unit fraction (i.e., one with a numerator of "1") is equivalent to dividing the whole number by the denominator. The reason for this is

clear: a unitary common fraction is one of a number of equal parts of the whole; if the whole is an integer, the fraction is then equal to the whole divided by the number of parts.

For example:



$$\begin{aligned}\text{One sixth of } 24 &= 24 \div 6 \\ &= 4\end{aligned}$$

### ***Improper Fractions and Mixed Numbers***

Numbers which include both an integer greater than zero and a common fraction (e.g.,  $4\frac{1}{2}$ ) may be recorded as either an improper fraction or a mixed number.

An *improper fraction* has a numerator which is greater than the denominator. The fraction is thus greater than one.

A *mixed number* has a whole number part and a common fraction part. Again, it is clearly greater than one. For every improper fraction there is a unique mixed number equal to it which uses the same denominator, and vice versa.

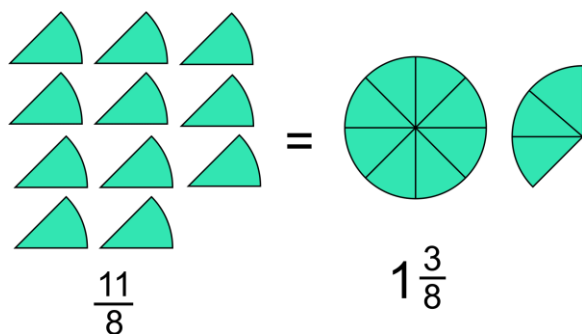
The normal process taught to convert between improper fractions and mixed numbers is to apply an algorithm:

Improper to mixed no.: divide the numerator by the denominator

Mixed number to improper fraction: multiply the denominator by the whole number, then add the numerator. Write the new number as the numerator of the improper fraction.

These methods are mathematically correct, and are the most efficient way to convert any example using a “manual” process. However, as with all procedures, if introduced to students before they are understood, they will likely be used by students in an unthinking way, and later are likely to be forgotten, mixed up with other procedures or misapplied.

Use materials to illustrate the improper fraction or mixed numbers, and have students manipulate the materials to regroup into the other representation. For example:



Ask students to discuss the connection between the shapes and the numbers involved. For example, with the above numbers, you could ask question such as “What is the connection between 11, 8, and

3?” “Why does the mixed number have 1 whole and 3 eighths left over?”.

Link examples like this to division with remainders, such as:

$$11 \div 8 = 1 \text{ remainder } 3$$

$$= 1 \frac{3}{8}$$

This helps make the connection between every common fraction and division:

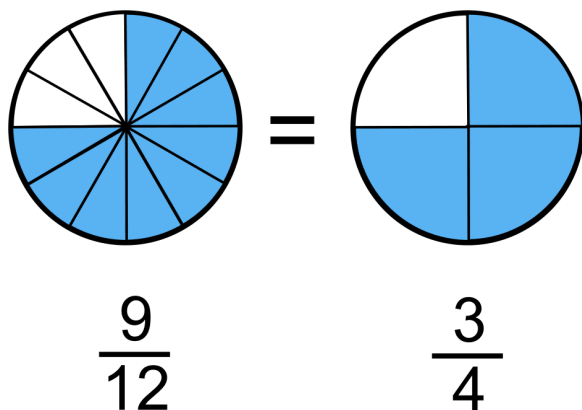
$$a \div b = \frac{a}{b}$$

### ***Equivalent Fractions***

In case anyone isn’t clear on what is meant by the word “equivalent”, these fractions are *equal* to each other. In other words, it could be helpful to students to refer to them sometimes as “equal fractions”, to emphasize the fact that they refer to the same quantity, and are merely different ways to symbolically refer to a fractional amount.

Here again, we do not want to teach too early a mechanical method of calculating an equivalent fraction. Doing so leads for many students to treating the procedure as an algorithm to be carried out without thinking, a sure path for some students to later confusion and failure to apply it correctly.

It is recommended to use visual or physical models to reveal the equivalence / equality of pairs of equivalent fractions:



Have the students investigate the numbers involved (before teaching them a formal method for calculating equivalent fractions), and ask them what they notice about 9 and 12, compared to 3 and 4.

### ***Simplifying Fractions***

This strategy follows on from equivalent fractions, with a specific goal: to find the smallest numbers making up an equivalent fraction.

Starting with materials, as in the previous example, have students investigate the simplest way to visually or physically represent a given fraction, using the smallest number of parts.

Later, discuss the process for finding the simplest equivalent fraction, by linking it to finding the lowest common factor of a pair of numbers. For example:

Simplify  $\frac{14}{21}$

Factors of 14: 2, 7, 14

Factors of 21: 3, 7, 21

Lowest Common Factor: 7

$$\text{Simplified fraction} = \frac{14 \div 7}{21 \div 7} = \frac{2}{3}$$

This process can also be applied to improper fractions. For example:

$$\frac{15}{9} = \frac{5}{3} = 1\frac{2}{3}$$

### ***Comparing Fractions***

Comparing a pair of common fractions is one of the most complex processes to apply to common fractions, requiring a good knowledge of number facts and an understanding of fraction concepts and notation.

A variety of methods can be applied to this process. The particular numerators and denominators involved will indicate the most efficient method for comparing two common fractions.

#### *a) Common Denominators*

If the two denominators are the same, then the sizes of the two numerators will easily indicate which fraction is larger. For example:

$$\frac{9}{12} > \frac{7}{12}$$

#### *b) Related Denominators*

If one denominator is a factor of the other, the fraction with the smaller denominator can be multiplied by the appropriate number to make the denominators the same. For example:

$$\frac{2}{3} [ \quad ] \frac{5}{6}$$

$$\frac{4}{6} < \frac{5}{6}$$



c) *Common numerators*

If the two fractions have the same numerator, then the denominators will determine which is larger. Since larger denominators indicate smaller parts, the larger fraction will have the smaller numerator. For example:

$$\frac{5}{7} > \frac{5}{8}$$

d) *Improper fractions*

If improper fractions are converted to mixed numbers, if one number has more wholes, this indicates it is the larger number. For example:

$$\frac{11}{3} \left[ \right] \frac{9}{4}$$

$$3\frac{2}{3} > 2\frac{1}{4}$$

Other examples may be compared in the same way as for proper fractions, as in the following examples:

$$\frac{13}{5} < \frac{10}{5}$$

$$\frac{15}{10} \left[ \right] \frac{8}{5} : \frac{15}{10} > \frac{16}{10}$$

$$\frac{11}{4} > \frac{11}{5}$$

e) *Mixed numbers and improper fractions*

If one number is a mixed number and the other is an improper fraction, both numbers should be converted into either form or the other.

For example, comparing  $\frac{22}{6}$  and  $3\frac{1}{4}$ , both can be converted into mixed numbers with common denominators:

$$\frac{22}{6} = 3\frac{4}{6} = 3\frac{8}{12}$$

$$3\frac{1}{4} = 3\frac{3}{12}$$

$$\therefore \frac{22}{6} > 3\frac{1}{4}$$

Alternatively, converting both to improper fractions:

$$\frac{22}{6} = \frac{44}{12}$$

$$3\frac{1}{4} = \frac{13}{4} = \frac{39}{12}$$

$$\therefore \frac{22}{6} > 3\frac{1}{4}$$

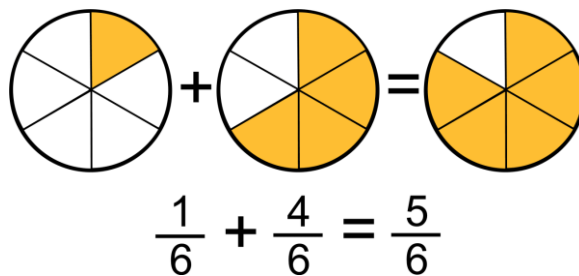
**Adding Fractions**

Before common fractions can be added, they should have the same denominator.

If the fractions being added already have common denominators, they may be added without converting them. For example:

$$\frac{1}{6} + \frac{4}{6} = \frac{5}{6}$$

Students should use pictorial or physical models of simple fractions operations to see why the numerators are added, and the denominators remain the same, as “labels” for the fractions. For example:



Students will need to know how to find the Lowest Common Multiple for the relevant

denominators. For example, when adding  $\frac{2}{5}$  and  $\frac{3}{4}$ , students should find the multiples of 5 and 4:

Multiples of 4: 4, 8, 12, 16, 20, 24, ...

Multiples of 5: 5, 10, 15, 20, 25, 30, ...

LCM = 20

Using that information, the two fractions can be converted into equivalent fractions in twentieths:

$$\frac{2}{5} = \frac{8}{20}$$

$$\frac{3}{4} = \frac{15}{20}$$

The two fractions can then be added:

$$\frac{2}{5} + \frac{3}{4} = \frac{8}{20} + \frac{15}{20} = \frac{23}{20} = 1\frac{3}{20}$$

Common fraction addition questions may be laid out either horizontally (which for many people is the traditional method), or vertically, as in the following example.

The vertical layout connects the operation with whole-number addition, and the idea of “regrouping” can be applied to explain converting an improper fraction into a mixed number. For example:

$$\begin{array}{r} 4\frac{4}{5} \\ + 2\frac{3}{5} \\ \hline 6\frac{7}{5} = 7\frac{2}{5} \end{array}$$

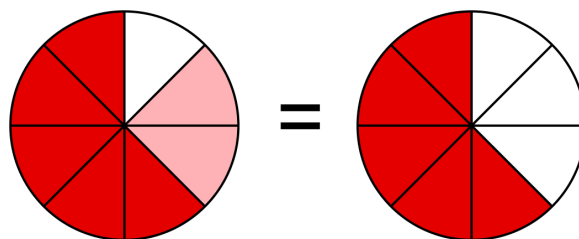
### **Subtracting Fractions**

Before common fractions can be subtracted from one another, they should have the same denominator.

If the fractions involved already have common denominators, they may be processed without converting them. For example:

$$\frac{7}{8} + \frac{2}{8} = \frac{5}{8}$$

As for addition, students should use pictorial or physical models of simple fractions operations to see why the numerators are subtracted, and the denominators remain the same. For example:



$$\frac{7}{8} - \frac{2}{8} = \frac{5}{8}$$

Lowest Common Multiples again have to be identified for the relevant denominators. For example, when completing  $\frac{7}{9} - \frac{1}{3}$ , students should find the multiples of 9 and 3:

Multiples of 9: 9, 18, 27, 36, 45, ...

Multiples of 3: 3, 9, 12, 15, 18, 21, ...

LCM = 9

Using that information, the fraction  $\frac{1}{3}$  can be converted into ninths:

$$\frac{1}{3} = \frac{3}{9}$$

The operation can then be carried out:

$$\frac{7}{9} - \frac{1}{3} = \frac{7}{9} - \frac{3}{9} = \frac{4}{9}$$

Common fraction subtraction questions may also be laid out either horizontally, or vertically, as in the following example.

The vertical layout connects the operation with whole-number subtraction, and the idea of “regrouping” can be applied to “making more” fractions to be subtracted. For example:

$$\begin{array}{r}
 5 \quad \cancel{6} \frac{1}{8} \\
 - 1 \frac{3}{8} \\
 \hline
 4 \frac{6}{8}
 \end{array}$$

### **Converting Decimal Fractions to Common Fractions**

Students should learn to name and think of decimal fractions in terms of the final place. For example, the fraction “0.7” should be named as “seven tenths”, or “zero and seven tenths”. The common adult reading of this as “zero point seven” should be avoided, as it does not include the value of the place, and so is less helpful.

Similarly, decimal fractions with hundredths should be named this way: 0.46 is read as “zero and forty-six hundredths”.

With this protocol in place, writing a decimal fraction using common fraction notation is not difficult, since the name of

the fraction indicates the denominator. For example:

$$\begin{aligned}
 0.34 &= \frac{34}{100} \\
 1.87 &= 1 \frac{87}{100}
 \end{aligned}$$

A teacher may request students to simplify the common fraction, where this is possible:

$$8.25 = 8 \frac{25}{100} = 8 \frac{1}{4}$$

### **Converting Common Fractions to Decimal Fractions**

a) *Denominator is 10 or 100*

Where the common fraction’s denominator is a power of ten, the decimal equivalent is easy for students to determine. For example:

$$\frac{35}{100} = 0.35$$

b) *Denominator is a factor of 10 or 100*

For denominators such as 20, 5 or 2, an equivalent fraction with a denominator of 10 or 100 can be found, which is then easily written as a decimal fraction. For example:

$$\frac{6}{25} = \frac{24}{100} = 0.24$$

c) *Other denominators*

Exercises in this eBook do not include more challenging examples, in which the denominator cannot be converted into tenths or hundredths. For students who are ready and capable of converting harder examples, the standard method is to divide the numerator by the denominator.

Another way to look at this method is to consider that a common fraction has the

same value as, or is another notation for, the quotient of the numerator to the denominator. For example:

$$\frac{2}{9} = 2 \div 9$$

Dividing numbers may be carried out using written methods or digital technologies, as the teacher prefers. We recommend that students learn the written procedures for all operations, as a way to better understand the operation, before using the “automatic” calculator option.

Some examples of common fractions converted to decimal notation:

$$\frac{5}{8} = 5 \div 8 = 0.625$$

$$\frac{2}{7} = 2 \div 7 = 0.288 \text{ (to 3 decimal places)}$$

$$\frac{6}{11} = 6 \div 11 = 0.\overline{54}$$

# Check Up Tests Markbook

There are 4 or 5 Check Up Tests in this eBook. Enter students' scores and times below to keep track of their progress.

[illegible]

[illegible]



# Standard Worksheets



## Standard Worksheets

Standard Worksheets are designed for use by the majority of students in a regular class.

### Suggested Uses:

1. Use one worksheet per day for four days a week, followed by a Check-Up sheet on the tenth day, once per two weeks. This program will take 10 weeks in total, after which the majority of students should know the arithmetic facts they have been practising.
2. Use a Checkup sheet to discover your students' strengths and weaknesses. Use a targeted approach to customize each student's program, providing each student with a selection of Standard Worksheets which match that student's needs.

Note: **Answer keys** for all worksheets are in the Answer Keys Section of this eBook.

Name: \_\_\_\_\_

Score: \_\_\_\_\_

Multiplying by Fractions: 1 [ A ]



<input type="checkbox"/> x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Multiplying Fractions by Whole Numbers:**

$$\frac{3}{4} \text{ of } 12 = 3$$

1. Divide the whole number by the denominator:

$$\frac{1}{4} \times 12 = 12 \div 4 = 3$$

2. If one quarter of 12 = 3, then three quarters = 9 :

$$\frac{3}{4} \times 12 = (12 \div 4) \times 3 = 3 \times 3 = 9$$

**Multiplying unit fractions by whole numbers**

- |                                |                                 |
|--------------------------------|---------------------------------|
| 1) $\frac{1}{9}$ of 45 = _____ | 6) $\frac{1}{10}$ of 10 = _____ |
| 2) $\frac{1}{8}$ of 48 = _____ | 7) $\frac{1}{4}$ of 40 = _____  |
| 3) $\frac{1}{2}$ of 8 = _____  | 8) $\frac{1}{4}$ of 32 = _____  |
| 4) $\frac{1}{9}$ of 27 = _____ | 9) $\frac{1}{9}$ of 18 = _____  |
| 5) $\frac{1}{5}$ of 15 = _____ | 10) $\frac{1}{7}$ of 49 = _____ |

**Multiplying whole numbers by unit fractions**

- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| 31) $28 \times \frac{1}{7} =$ _____ | 36) $42 \times \frac{1}{6} =$ _____ |
| 32) $5 \times \frac{1}{5} =$ _____  | 37) $40 \times \frac{1}{4} =$ _____ |
| 33) $16 \times \frac{1}{4} =$ _____ | 38) $21 \times \frac{1}{3} =$ _____ |
| 34) $42 \times \frac{1}{7} =$ _____ | 39) $24 \times \frac{1}{3} =$ _____ |
| 35) $48 \times \frac{1}{8} =$ _____ | 40) $36 \times \frac{1}{9} =$ _____ |

**Multiplying fractions by whole numbers**

- |                                 |                                  |
|---------------------------------|----------------------------------|
| 11) $\frac{1}{6}$ of 30 = _____ | 21) $\frac{1}{5}$ of 25 = _____  |
| 12) $\frac{2}{6}$ of 30 = _____ | 22) $\frac{3}{5}$ of 25 = _____  |
| 13) $\frac{1}{4}$ of 36 = _____ | 23) $\frac{1}{8}$ of 16 = _____  |
| 14) $\frac{3}{4}$ of 36 = _____ | 24) $\frac{5}{8}$ of 16 = _____  |
| 15) $\frac{1}{3}$ of 24 = _____ | 25) $\frac{1}{6}$ of 24 = _____  |
| 16) $\frac{2}{3}$ of 24 = _____ | 26) $\frac{4}{6}$ of 24 = _____  |
| 17) $\frac{1}{5}$ of 20 = _____ | 27) $\frac{1}{5}$ of 15 = _____  |
| 18) $\frac{3}{5}$ of 20 = _____ | 28) $\frac{4}{5}$ of 15 = _____  |
| 19) $\frac{1}{3}$ of 12 = _____ | 29) $\frac{1}{10}$ of 90 = _____ |
| 20) $\frac{2}{3}$ of 12 = _____ | 30) $\frac{7}{10}$ of 90 = _____ |

**Multiplying whole numbers by fractions**

- |                                      |                                     |
|--------------------------------------|-------------------------------------|
| 41) $36 \times \frac{1}{4} =$ _____  | 51) $30 \times \frac{1}{6} =$ _____ |
| 42) $36 \times \frac{3}{4} =$ _____  | 52) $30 \times \frac{2}{6} =$ _____ |
| 43) $18 \times \frac{1}{9} =$ _____  | 53) $54 \times \frac{1}{6} =$ _____ |
| 44) $18 \times \frac{8}{9} =$ _____  | 54) $54 \times \frac{3}{6} =$ _____ |
| 45) $40 \times \frac{1}{10} =$ _____ | 55) $63 \times \frac{1}{9} =$ _____ |
| 46) $40 \times \frac{8}{10} =$ _____ | 56) $63 \times \frac{4}{9} =$ _____ |
| 47) $18 \times \frac{1}{6} =$ _____  | 57) $25 \times \frac{1}{5} =$ _____ |
| 48) $18 \times \frac{4}{6} =$ _____  | 58) $25 \times \frac{4}{5} =$ _____ |
| 49) $9 \times \frac{1}{9} =$ _____   | 59) $32 \times \frac{1}{4} =$ _____ |
| 50) $9 \times \frac{5}{9} =$ _____   | 60) $32 \times \frac{3}{4} =$ _____ |

This worksheet is part of the Professor Pete's Classroom eBook "Bring It On! Fraction Worksheets". The recommended teaching sequence is shown in the bar at the top of this sheet.

Name: \_\_\_\_\_

Score: \_\_\_\_\_

Multiplying by Fractions: 1 [ B ]



<input type="checkbox"/> x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Multiplying unit fractions by whole numbers**

- 1)  $\frac{1}{4}$  of 24 = \_\_\_\_\_ 6)  $\frac{1}{4}$  of 16 = \_\_\_\_\_
- 2)  $\frac{1}{9}$  of 27 = \_\_\_\_\_ 7)  $\frac{1}{10}$  of 30 = \_\_\_\_\_
- 3)  $\frac{1}{4}$  of 16 = \_\_\_\_\_ 8)  $\frac{1}{5}$  of 10 = \_\_\_\_\_
- 4)  $\frac{1}{3}$  of 18 = \_\_\_\_\_ 9)  $\frac{1}{6}$  of 24 = \_\_\_\_\_
- 5)  $\frac{1}{7}$  of 42 = \_\_\_\_\_ 10)  $\frac{1}{3}$  of 24 = \_\_\_\_\_

**Multiplying whole numbers by unit fractions**

- 31)  $20 \times \frac{1}{10} =$  \_\_\_\_\_ 36)  $18 \times \frac{1}{2} =$  \_\_\_\_\_
- 32)  $30 \times \frac{1}{3} =$  \_\_\_\_\_ 37)  $30 \times \frac{1}{6} =$  \_\_\_\_\_
- 33)  $18 \times \frac{1}{2} =$  \_\_\_\_\_ 38)  $72 \times \frac{1}{9} =$  \_\_\_\_\_
- 34)  $18 \times \frac{1}{3} =$  \_\_\_\_\_ 39)  $27 \times \frac{1}{9} =$  \_\_\_\_\_
- 35)  $48 \times \frac{1}{6} =$  \_\_\_\_\_ 40)  $24 \times \frac{1}{3} =$  \_\_\_\_\_

**Multiplying fractions by whole numbers**

- 11)  $\frac{1}{9}$  of 45 = \_\_\_\_\_ 21)  $\frac{1}{7}$  of 49 = \_\_\_\_\_
- 12)  $\frac{5}{9}$  of 45 = \_\_\_\_\_ 22)  $\frac{5}{7}$  of 49 = \_\_\_\_\_
- 13)  $\frac{1}{4}$  of 16 = \_\_\_\_\_ 23)  $\frac{1}{6}$  of 42 = \_\_\_\_\_
- 14)  $\frac{3}{4}$  of 16 = \_\_\_\_\_ 24)  $\frac{5}{6}$  of 42 = \_\_\_\_\_
- 15)  $\frac{1}{10}$  of 40 = \_\_\_\_\_ 25)  $\frac{1}{4}$  of 24 = \_\_\_\_\_
- 16)  $\frac{8}{10}$  of 40 = \_\_\_\_\_ 26)  $\frac{3}{4}$  of 24 = \_\_\_\_\_
- 17)  $\frac{1}{5}$  of 45 = \_\_\_\_\_ 27)  $\frac{1}{9}$  of 72 = \_\_\_\_\_
- 18)  $\frac{3}{5}$  of 45 = \_\_\_\_\_ 28)  $\frac{6}{9}$  of 72 = \_\_\_\_\_
- 19)  $\frac{1}{10}$  of 80 = \_\_\_\_\_ 29)  $\frac{1}{6}$  of 30 = \_\_\_\_\_
- 20)  $\frac{6}{10}$  of 80 = \_\_\_\_\_ 30)  $\frac{5}{6}$  of 30 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

- 41)  $32 \times \frac{1}{8} =$  \_\_\_\_\_ 51)  $35 \times \frac{1}{5} =$  \_\_\_\_\_
- 42)  $32 \times \frac{5}{8} =$  \_\_\_\_\_ 52)  $35 \times \frac{4}{5} =$  \_\_\_\_\_
- 43)  $36 \times \frac{1}{9} =$  \_\_\_\_\_ 53)  $63 \times \frac{1}{7} =$  \_\_\_\_\_
- 44)  $36 \times \frac{6}{9} =$  \_\_\_\_\_ 54)  $63 \times \frac{6}{7} =$  \_\_\_\_\_
- 45)  $42 \times \frac{1}{7} =$  \_\_\_\_\_ 55)  $81 \times \frac{1}{9} =$  \_\_\_\_\_
- 46)  $42 \times \frac{5}{7} =$  \_\_\_\_\_ 56)  $81 \times \frac{8}{9} =$  \_\_\_\_\_
- 47)  $27 \times \frac{1}{3} =$  \_\_\_\_\_ 57)  $40 \times \frac{1}{5} =$  \_\_\_\_\_
- 48)  $27 \times \frac{2}{3} =$  \_\_\_\_\_ 58)  $40 \times \frac{4}{5} =$  \_\_\_\_\_
- 49)  $32 \times \frac{1}{8} =$  \_\_\_\_\_ 59)  $63 \times \frac{1}{7} =$  \_\_\_\_\_
- 50)  $32 \times \frac{4}{8} =$  \_\_\_\_\_ 60)  $63 \times \frac{5}{7} =$  \_\_\_\_\_

**Revision**

- 61)  $9 + 9 =$  \_\_\_\_\_ 65)  $7 + 6 =$  \_\_\_\_\_ 69)  $18 - 9 =$  \_\_\_\_\_ 73)  $20 - 10 =$  \_\_\_\_\_
- 62)  $8 + 8 =$  \_\_\_\_\_ 66)  $5 + 9 =$  \_\_\_\_\_ 70)  $19 - 10 =$  \_\_\_\_\_ 74)  $9 - 3 =$  \_\_\_\_\_
- 63)  $4 + 4 =$  \_\_\_\_\_ 67)  $4 + 9 =$  \_\_\_\_\_ 71)  $16 - 8 =$  \_\_\_\_\_ 75)  $4 - 2 =$  \_\_\_\_\_
- 64)  $4 + 5 =$  \_\_\_\_\_ 68)  $9 + 4 =$  \_\_\_\_\_ 72)  $12 - 7 =$  \_\_\_\_\_ 76)  $14 - 8 =$  \_\_\_\_\_

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Multiplying by Fractions: 1 [ C ]



<input type="checkbox"/> x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Multiplying unit fractions by whole numbers**

- 1)  $\frac{1}{4}$  of 20 = \_\_\_\_\_ 6)  $\frac{1}{4}$  of 36 = \_\_\_\_\_
- 2)  $\frac{1}{9}$  of 81 = \_\_\_\_\_ 7)  $\frac{1}{3}$  of 30 = \_\_\_\_\_
- 3)  $\frac{1}{2}$  of 10 = \_\_\_\_\_ 8)  $\frac{1}{6}$  of 30 = \_\_\_\_\_
- 4)  $\frac{1}{9}$  of 72 = \_\_\_\_\_ 9)  $\frac{1}{7}$  of 49 = \_\_\_\_\_
- 5)  $\frac{1}{8}$  of 72 = \_\_\_\_\_ 10)  $\frac{1}{10}$  of 40 = \_\_\_\_\_

**Multiplying whole numbers by unit fractions**

- 31)  $30 \times \frac{1}{10} =$  \_\_\_\_\_ 36)  $20 \times \frac{1}{5} =$  \_\_\_\_\_
- 32)  $36 \times \frac{1}{4} =$  \_\_\_\_\_ 37)  $24 \times \frac{1}{4} =$  \_\_\_\_\_
- 33)  $18 \times \frac{1}{6} =$  \_\_\_\_\_ 38)  $40 \times \frac{1}{5} =$  \_\_\_\_\_
- 34)  $40 \times \frac{1}{10} =$  \_\_\_\_\_ 39)  $10 \times \frac{1}{10} =$  \_\_\_\_\_
- 35)  $56 \times \frac{1}{7} =$  \_\_\_\_\_ 40)  $48 \times \frac{1}{8} =$  \_\_\_\_\_

**Multiplying fractions by whole numbers**

- 11)  $\frac{2}{3}$  of 15 = \_\_\_\_\_ 21)  $\frac{1}{2}$  of 20 = \_\_\_\_\_
- 12)  $\frac{5}{7}$  of 49 = \_\_\_\_\_ 22)  $\frac{3}{4}$  of 20 = \_\_\_\_\_
- 13)  $\frac{2}{4}$  of 28 = \_\_\_\_\_ 23)  $\frac{2}{4}$  of 24 = \_\_\_\_\_
- 14)  $\frac{8}{10}$  of 30 = \_\_\_\_\_ 24)  $\frac{4}{10}$  of 10 = \_\_\_\_\_
- 15)  $\frac{1}{3}$  of 27 = \_\_\_\_\_ 25)  $\frac{1}{2}$  of 24 = \_\_\_\_\_
- 16)  $\frac{1}{5}$  of 5 = \_\_\_\_\_ 26)  $\frac{2}{4}$  of 12 = \_\_\_\_\_
- 17)  $\frac{3}{5}$  of 30 = \_\_\_\_\_ 27)  $\frac{2}{9}$  of 9 = \_\_\_\_\_
- 18)  $\frac{7}{10}$  of 40 = \_\_\_\_\_ 28)  $\frac{3}{4}$  of 40 = \_\_\_\_\_
- 19)  $\frac{1}{2}$  of 8 = \_\_\_\_\_ 29)  $\frac{1}{7}$  of 49 = \_\_\_\_\_
- 20)  $\frac{1}{3}$  of 12 = \_\_\_\_\_ 30)  $\frac{2}{7}$  of 42 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

- 41)  $12 \times \frac{4}{6} =$  \_\_\_\_\_ 51)  $18 \times \frac{2}{6} =$  \_\_\_\_\_
- 42)  $20 \times \frac{1}{2} =$  \_\_\_\_\_ 52)  $21 \times \frac{2}{7} =$  \_\_\_\_\_
- 43)  $27 \times \frac{4}{9} =$  \_\_\_\_\_ 53)  $6 \times \frac{1}{2} =$  \_\_\_\_\_
- 44)  $30 \times \frac{8}{10} =$  \_\_\_\_\_ 54)  $18 \times \frac{3}{9} =$  \_\_\_\_\_
- 45)  $36 \times \frac{1}{6} =$  \_\_\_\_\_ 55)  $21 \times \frac{2}{7} =$  \_\_\_\_\_
- 46)  $6 \times \frac{1}{2} =$  \_\_\_\_\_ 56)  $12 \times \frac{2}{6} =$  \_\_\_\_\_
- 47)  $32 \times \frac{5}{8} =$  \_\_\_\_\_ 57)  $10 \times \frac{2}{10} =$  \_\_\_\_\_
- 48)  $40 \times \frac{3}{4} =$  \_\_\_\_\_ 58)  $42 \times \frac{2}{6} =$  \_\_\_\_\_
- 49)  $7 \times \frac{5}{7} =$  \_\_\_\_\_ 59)  $48 \times \frac{3}{8} =$  \_\_\_\_\_
- 50)  $40 \times \frac{3}{10} =$  \_\_\_\_\_ 60)  $45 \times \frac{2}{5} =$  \_\_\_\_\_

**Revision**

- 61)  $4 + 7 =$  \_\_\_\_\_ 65)  $4 + 6 =$  \_\_\_\_\_ 69)  $9 - 5 =$  \_\_\_\_\_ 73)  $17 - 9 =$  \_\_\_\_\_
- 62)  $5 + 5 =$  \_\_\_\_\_ 66)  $9 + 4 =$  \_\_\_\_\_ 70)  $5 - 2 =$  \_\_\_\_\_ 74)  $16 - 8 =$  \_\_\_\_\_
- 63)  $7 + 3 =$  \_\_\_\_\_ 67)  $4 + 4 =$  \_\_\_\_\_ 71)  $11 - 5 =$  \_\_\_\_\_ 75)  $11 - 7 =$  \_\_\_\_\_
- 64)  $9 + 6 =$  \_\_\_\_\_ 68)  $9 + 5 =$  \_\_\_\_\_ 72)  $13 - 8 =$  \_\_\_\_\_ 76)  $12 - 2 =$  \_\_\_\_\_

This worksheet is part of the Professor Pete's Classroom eBook "Bring It On! Fraction Worksheets". The recommended teaching sequence is shown in the bar at the top of this sheet.

Name: \_\_\_\_\_

Score: \_\_\_\_\_

Multiplying by Fractions: 1 [ D ]



<input type="checkbox"/> x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Multiplying unit fractions by whole numbers**

- 1)  $\frac{1}{2}$  of 18 = \_\_\_\_\_ 6)  $\frac{1}{2}$  of 10 = \_\_\_\_\_
- 2)  $\frac{1}{3}$  of 21 = \_\_\_\_\_ 7)  $\frac{1}{10}$  of 10 = \_\_\_\_\_
- 3)  $\frac{1}{4}$  of 36 = \_\_\_\_\_ 8)  $\frac{1}{8}$  of 64 = \_\_\_\_\_
- 4)  $\frac{1}{7}$  of 49 = \_\_\_\_\_ 9)  $\frac{1}{6}$  of 54 = \_\_\_\_\_
- 5)  $\frac{1}{6}$  of 30 = \_\_\_\_\_ 10)  $\frac{1}{8}$  of 56 = \_\_\_\_\_

**Multiplying whole numbers by unit fractions**

- 31)  $5 \times \frac{1}{5} =$  \_\_\_\_\_ 36)  $35 \times \frac{1}{5} =$  \_\_\_\_\_
- 32)  $81 \times \frac{1}{9} =$  \_\_\_\_\_ 37)  $18 \times \frac{1}{6} =$  \_\_\_\_\_
- 33)  $28 \times \frac{1}{4} =$  \_\_\_\_\_ 38)  $72 \times \frac{1}{9} =$  \_\_\_\_\_
- 34)  $18 \times \frac{1}{2} =$  \_\_\_\_\_ 39)  $42 \times \frac{1}{7} =$  \_\_\_\_\_
- 35)  $49 \times \frac{1}{7} =$  \_\_\_\_\_ 40)  $63 \times \frac{1}{9} =$  \_\_\_\_\_

**Multiplying fractions by whole numbers**

- 11)  $\frac{3}{8}$  of 16 = \_\_\_\_\_ 21)  $\frac{4}{7}$  of 7 = \_\_\_\_\_
- 12)  $\frac{6}{10}$  of 10 = \_\_\_\_\_ 22)  $\frac{1}{2}$  of 16 = \_\_\_\_\_
- 13)  $\frac{5}{6}$  of 24 = \_\_\_\_\_ 23)  $\frac{5}{7}$  of 35 = \_\_\_\_\_
- 14)  $\frac{3}{9}$  of 18 = \_\_\_\_\_ 24)  $\frac{3}{7}$  of 14 = \_\_\_\_\_
- 15)  $\frac{3}{10}$  of 40 = \_\_\_\_\_ 25)  $\frac{1}{2}$  of 16 = \_\_\_\_\_
- 16)  $\frac{1}{3}$  of 21 = \_\_\_\_\_ 26)  $\frac{8}{9}$  of 45 = \_\_\_\_\_
- 17)  $\frac{2}{3}$  of 18 = \_\_\_\_\_ 27)  $\frac{6}{8}$  of 16 = \_\_\_\_\_
- 18)  $\frac{3}{5}$  of 20 = \_\_\_\_\_ 28)  $\frac{4}{8}$  of 8 = \_\_\_\_\_
- 19)  $\frac{2}{8}$  of 32 = \_\_\_\_\_ 29)  $\frac{4}{7}$  of 35 = \_\_\_\_\_
- 20)  $\frac{1}{5}$  of 35 = \_\_\_\_\_ 30)  $\frac{4}{10}$  of 10 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

- 41)  $9 \times \frac{2}{3} =$  \_\_\_\_\_ 51)  $9 \times \frac{4}{9} =$  \_\_\_\_\_
- 42)  $12 \times \frac{1}{2} =$  \_\_\_\_\_ 52)  $42 \times \frac{3}{6} =$  \_\_\_\_\_
- 43)  $10 \times \frac{2}{10} =$  \_\_\_\_\_ 53)  $32 \times \frac{3}{4} =$  \_\_\_\_\_
- 44)  $20 \times \frac{6}{10} =$  \_\_\_\_\_ 54)  $15 \times \frac{1}{5} =$  \_\_\_\_\_
- 45)  $15 \times \frac{3}{5} =$  \_\_\_\_\_ 55)  $9 \times \frac{2}{3} =$  \_\_\_\_\_
- 46)  $40 \times \frac{6}{10} =$  \_\_\_\_\_ 56)  $32 \times \frac{2}{8} =$  \_\_\_\_\_
- 47)  $48 \times \frac{5}{6} =$  \_\_\_\_\_ 57)  $27 \times \frac{1}{9} =$  \_\_\_\_\_
- 48)  $40 \times \frac{7}{10} =$  \_\_\_\_\_ 58)  $10 \times \frac{1}{2} =$  \_\_\_\_\_
- 49)  $18 \times \frac{1}{3} =$  \_\_\_\_\_ 59)  $35 \times \frac{3}{7} =$  \_\_\_\_\_
- 50)  $5 \times \frac{2}{5} =$  \_\_\_\_\_ 60)  $30 \times \frac{9}{10} =$  \_\_\_\_\_

**Revision**

- 61)  $8 + 2 =$  \_\_\_\_\_ 65)  $4 + 7 =$  \_\_\_\_\_ 69)  $12 - 4 =$  \_\_\_\_\_ 73)  $14 - 6 =$  \_\_\_\_\_
- 62)  $9 + 7 =$  \_\_\_\_\_ 66)  $6 + 5 =$  \_\_\_\_\_ 70)  $16 - 10 =$  \_\_\_\_\_ 74)  $19 - 10 =$  \_\_\_\_\_
- 63)  $4 + 5 =$  \_\_\_\_\_ 67)  $9 + 6 =$  \_\_\_\_\_ 71)  $13 - 8 =$  \_\_\_\_\_ 75)  $8 - 4 =$  \_\_\_\_\_
- 64)  $5 + 9 =$  \_\_\_\_\_ 68)  $7 + 6 =$  \_\_\_\_\_ 72)  $11 - 2 =$  \_\_\_\_\_ 76)  $13 - 4 =$  \_\_\_\_\_

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Improper and Mixed Numbers: **2 [ A ]**PROFESSOR PETE'S  
**CLASSROOM**

x

equivalent

compare

+/- mixed

adv decimals

imp/mixed

simplify

+/- common

decimals

revision

**Converting Mixed Numbers to Improper Fractions:**

- The denominator shows how many fractional parts are in one whole.
- Multiply that denominator by the whole number.
- Add that to the number of fractional parts (numerator).
- Together they tell you the numerator in the improper fraction.

$2\frac{3}{5}$  each whole has 5 fifths  
so 2 wholes are  $2 \times 5$  fifths or 10  
fifths then add in the 3 fifths

$$\frac{5}{5} + \frac{5}{5} + \frac{3}{5} = \frac{13}{5} \quad \text{or} \quad (2 \times \frac{5}{5}) + \frac{3}{5} = \frac{13}{5}$$

**Mixed numbers to improper fractions**

- |  |   |   |   |
|--|---|---|---|
| 1) $1\frac{3}{4} = \underline{\hspace{2cm}}$ | 6) $5\frac{5}{6} = \underline{\hspace{2cm}}$  | 11) $3\frac{4}{8} = \underline{\hspace{2cm}}$ | 16) $3\frac{2}{5} = \underline{\hspace{2cm}}$ |
| 2) $3\frac{2}{6} = \underline{\hspace{2cm}}$ | 7) $6\frac{1}{2} = \underline{\hspace{2cm}}$  | 12) $1\frac{4}{7} = \underline{\hspace{2cm}}$ | 17) $4\frac{1}{5} = \underline{\hspace{2cm}}$ |
| 3) $4\frac{1}{3} = \underline{\hspace{2cm}}$ | 8) $2\frac{2}{3} = \underline{\hspace{2cm}}$  | 13) $6\frac{1}{4} = \underline{\hspace{2cm}}$ | 18) $5\frac{1}{2} = \underline{\hspace{2cm}}$ |
| 4) $1\frac{4}{5} = \underline{\hspace{2cm}}$ | 9) $1\frac{2}{4} = \underline{\hspace{2cm}}$  | 14) $2\frac{1}{5} = \underline{\hspace{2cm}}$ | 19) $2\frac{3}{4} = \underline{\hspace{2cm}}$ |
| 5) $2\frac{2}{4} = \underline{\hspace{2cm}}$ | 10) $3\frac{2}{5} = \underline{\hspace{2cm}}$ | 15) $4\frac{3}{4} = \underline{\hspace{2cm}}$ | 20) $4\frac{2}{4} = \underline{\hspace{2cm}}$ |

**Converting Improper Fractions to Mixed Numbers:**

- The denominator shows how many fractional parts are in one whole.
- Divide the numerator (top number) by the denominator.
- Write the whole number answer.
- Then write the remainder as the numerator above the denominator.

$\frac{11}{4}$   $11 \div 4 = 2$  remainder 3  
so the mixed number is

$$2\frac{3}{4}$$

Remember the fraction is in quarters so  
your remainder is a number of quarters.

**Improper fractions to mixed numbers**

- |   |   |   |   |
|---|---|---|---|
| 21) $\frac{11}{4} = \underline{\hspace{2cm}}$ | 26) $\frac{13}{5} = \underline{\hspace{2cm}}$ | 31) $\frac{14}{3} = \underline{\hspace{2cm}}$ | 36) $\frac{8}{3} = \underline{\hspace{2cm}}$  |
| 22) $\frac{14}{3} = \underline{\hspace{2cm}}$ | 27) $\frac{15}{4} = \underline{\hspace{2cm}}$ | 32) $\frac{5}{2} = \underline{\hspace{2cm}}$  | 37) $\frac{13}{4} = \underline{\hspace{2cm}}$ |
| 23) $\frac{11}{5} = \underline{\hspace{2cm}}$ | 28) $\frac{7}{3} = \underline{\hspace{2cm}}$  | 33) $\frac{11}{2} = \underline{\hspace{2cm}}$ | 38) $\frac{6}{4} = \underline{\hspace{2cm}}$  |
| 24) $\frac{16}{5} = \underline{\hspace{2cm}}$ | 29) $\frac{12}{5} = \underline{\hspace{2cm}}$ | 34) $\frac{10}{4} = \underline{\hspace{2cm}}$ | 39) $\frac{17}{5} = \underline{\hspace{2cm}}$ |
| 25) $\frac{19}{5} = \underline{\hspace{2cm}}$ | 30) $\frac{18}{4} = \underline{\hspace{2cm}}$ | 35) $\frac{19}{4} = \underline{\hspace{2cm}}$ | 40) $\frac{14}{6} = \underline{\hspace{2cm}}$ |

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Improper and Mixed Numbers: 2 [ B ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Converting Mixed Numbers to Improper Fractions:**

- Sometimes there is only a whole number to be converted to an improper fraction.

$$2 = \frac{?}{3} \quad \text{each whole has 3 thirds so 2 wholes are } 2 \times 3 \text{ thirds or 6 thirds}$$

There are no extra thirds to add.

$$\frac{3}{3} + \frac{3}{3} = \frac{6}{3} \quad \text{or} \quad 2 \times \frac{3}{3} = \frac{6}{3}$$

**Mixed numbers to improper fractions**

- |   |  |  |  |
|---|--|--|--|
| 1) $5 \frac{2}{6} = \underline{\hspace{2cm}}$ | 6) $3 = \underline{\frac{\hspace{1cm}}{5}}$    | 11) $3 \frac{2}{6} = \underline{\hspace{2cm}}$ | 16) $3 \frac{2}{5} = \underline{\hspace{2cm}}$ |
| 2) $4 = \underline{\frac{\hspace{1cm}}{5}}$   | 7) $3 \frac{2}{5} = \underline{\hspace{2cm}}$  | 12) $1 = \underline{\frac{\hspace{1cm}}{4}}$   | 17) $4 \frac{4}{5} = \underline{\hspace{2cm}}$ |
| 3) $2 \frac{3}{4} = \underline{\hspace{2cm}}$ | 8) $2 = \underline{\frac{\hspace{1cm}}{8}}$    | 13) $5 \frac{1}{3} = \underline{\hspace{2cm}}$ | 18) $2 \frac{2}{4} = \underline{\hspace{2cm}}$ |
| 4) $1 \frac{4}{5} = \underline{\hspace{2cm}}$ | 9) $5 \frac{1}{2} = \underline{\hspace{2cm}}$  | 14) $2 \frac{1}{5} = \underline{\hspace{2cm}}$ | 19) $6 = \underline{\frac{\hspace{1cm}}{3}}$   |
| 5) $4 \frac{2}{4} = \underline{\hspace{2cm}}$ | 10) $1 \frac{4}{7} = \underline{\hspace{2cm}}$ | 15) $4 \frac{3}{4} = \underline{\hspace{2cm}}$ | 20) $1 \frac{3}{4} = \underline{\hspace{2cm}}$ |

**Converting Improper Fractions to Mixed Numbers:**

- Sometimes when the numerator is divided by the denominator there are no remainders and so the answer is a whole number only.

$$\frac{12}{4} \quad 12 \div 4 = 3 \text{ with no remainder so the answer is } 3$$

**Improper fractions to mixed numbers**

- |   |   |   |   |
|---|---|---|---|
| 21) $\frac{15}{3} = \underline{\hspace{2cm}}$ | 26) $\frac{15}{4} = \underline{\hspace{2cm}}$ | 31) $\frac{12}{5} = \underline{\hspace{2cm}}$ | 36) $\frac{16}{5} = \underline{\hspace{2cm}}$ |
| 22) $\frac{8}{3} = \underline{\hspace{2cm}}$  | 27) $\frac{24}{4} = \underline{\hspace{2cm}}$ | 32) $\frac{17}{5} = \underline{\hspace{2cm}}$ | 37) $\frac{13}{4} = \underline{\hspace{2cm}}$ |
| 23) $\frac{10}{5} = \underline{\hspace{2cm}}$ | 28) $\frac{8}{2} = \underline{\hspace{2cm}}$  | 33) $\frac{18}{4} = \underline{\hspace{2cm}}$ | 38) $\frac{14}{3} = \underline{\hspace{2cm}}$ |
| 24) $\frac{11}{2} = \underline{\hspace{2cm}}$ | 29) $\frac{14}{6} = \underline{\hspace{2cm}}$ | 34) $\frac{13}{5} = \underline{\hspace{2cm}}$ | 39) $\frac{16}{4} = \underline{\hspace{2cm}}$ |
| 25) $\frac{10}{3} = \underline{\hspace{2cm}}$ | 30) $\frac{21}{3} = \underline{\hspace{2cm}}$ | 35) $\frac{10}{4} = \underline{\hspace{2cm}}$ | 40) $\frac{21}{5} = \underline{\hspace{2cm}}$ |

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Improper and Mixed Numbers: 2 [ C ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Converting Mixed Numbers to Improper Fractions:**

- Remember:

$$2 \frac{3}{5} \quad \frac{5}{5} + \frac{5}{5} + \frac{3}{5} = \frac{13}{5} \quad \text{or} \quad (2 \times \frac{5}{5}) + \frac{3}{5} = \frac{13}{5}$$

**Mixed numbers to improper fractions**

- |                            |                             |                             |                             |
|----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 1) $3 \frac{1}{5} =$ _____ | 6) $5 = \frac{\quad}{4}$    | 11) $3 \frac{2}{6} =$ _____ | 16) $5 \frac{2}{3} =$ _____ |
| 2) $9 = \frac{\quad}{5}$   | 7) $6 \frac{2}{5} =$ _____  | 12) $8 = \frac{\quad}{4}$   | 17) $5 \frac{1}{2} =$ _____ |
| 3) $4 \frac{4}{5} =$ _____ | 8) $2 = \frac{\quad}{8}$    | 13) $4 \frac{3}{4} =$ _____ | 18) $2 \frac{2}{4} =$ _____ |
| 4) $1 \frac{4}{5} =$ _____ | 9) $2 \frac{3}{4} =$ _____  | 14) $2 \frac{1}{6} =$ _____ | 19) $6 = \frac{\quad}{2}$   |
| 5) $1 \frac{4}{7} =$ _____ | 10) $4 \frac{2}{7} =$ _____ | 15) $6 \frac{1}{2} =$ _____ | 20) $1 \frac{3}{4} =$ _____ |

**Converting Improper Fractions to Mixed Numbers:**

- Remember:

$$\frac{11}{4} \quad 11 \div 4 = 2 \text{ remainder } 3 \text{ so the mixed number is } 2 \frac{3}{4}$$

**Improper fractions to mixed numbers**

- |                            |                            |                            |                            |
|----------------------------|----------------------------|----------------------------|----------------------------|
| 21) $\frac{13}{3} =$ _____ | 26) $\frac{13}{5} =$ _____ | 31) $\frac{17}{5} =$ _____ | 36) $\frac{16}{5} =$ _____ |
| 22) $\frac{7}{5} =$ _____  | 27) $\frac{24}{4} =$ _____ | 32) $\frac{14}{6} =$ _____ | 37) $\frac{13}{4} =$ _____ |
| 23) $\frac{10}{4} =$ _____ | 28) $\frac{10}{2} =$ _____ | 33) $\frac{10}{7} =$ _____ | 38) $\frac{14}{3} =$ _____ |
| 24) $\frac{11}{6} =$ _____ | 29) $\frac{18}{4} =$ _____ | 34) $\frac{16}{4} =$ _____ | 39) $\frac{11}{5} =$ _____ |
| 25) $\frac{10}{5} =$ _____ | 30) $\frac{21}{3} =$ _____ | 35) $\frac{15}{6} =$ _____ | 40) $\frac{12}{5} =$ _____ |

**Revision**

- |                     |                     |                       |                      |
|---------------------|---------------------|-----------------------|----------------------|
| 41) $4 + 5 =$ _____ | 46) $9 + 8 =$ _____ | 51) $13 - 10 =$ _____ | 56) $13 - 7 =$ _____ |
| 42) $6 + 5 =$ _____ | 47) $8 + 2 =$ _____ | 52) $15 - 6 =$ _____  | 57) $6 - 3 =$ _____  |
| 43) $7 + 2 =$ _____ | 48) $6 + 9 =$ _____ | 53) $16 - 8 =$ _____  | 58) $11 - 7 =$ _____ |
| 44) $4 + 2 =$ _____ | 49) $7 + 4 =$ _____ | 54) $8 - 4 =$ _____   | 59) $5 - 3 =$ _____  |
| 45) $6 + 4 =$ _____ | 50) $5 + 9 =$ _____ | 55) $17 - 9 =$ _____  | 60) $8 - 3 =$ _____  |

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Improper and Mixed Numbers: 2 [ D ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Converting Mixed Numbers to Improper Fractions:**

- Remember:

$$2\frac{3}{5} \quad \frac{5}{5} + \frac{5}{5} + \frac{3}{5} = \frac{13}{5} \quad \text{or} \quad (2 \times \frac{5}{5}) + \frac{3}{5} = \frac{13}{5}$$

**Mixed numbers to improper fractions**

- |                            |                            |                             |                             |
|----------------------------|----------------------------|-----------------------------|-----------------------------|
| 1) $6\frac{2}{3} =$ _____  | 6) $8 = \frac{\quad}{6}$   | 11) $3\frac{2}{10} =$ _____ | 16) $10\frac{2}{6} =$ _____ |
| 2) $7 = \frac{\quad}{5}$   | 7) $5\frac{2}{5} =$ _____  | 12) $1 = \frac{2}{\quad}$   | 17) $4\frac{4}{10} =$ _____ |
| 3) $1\frac{7}{8} =$ _____  | 8) $4 = \frac{\quad}{8}$   | 13) $8\frac{1}{9} =$ _____  | 18) $3\frac{5}{6} =$ _____  |
| 4) $4\frac{4}{9} =$ _____  | 9) $10\frac{1}{2} =$ _____ | 14) $2\frac{5}{6} =$ _____  | 19) $6 = \frac{\quad}{8}$   |
| 5) $6\frac{5}{10} =$ _____ | 10) $7\frac{3}{7} =$ _____ | 15) $4\frac{3}{6} =$ _____  | 20) $1\frac{3}{6} =$ _____  |

**Converting Improper Fractions to Mixed Numbers:**

- Remember:

$$\frac{11}{4} \quad 11 \div 4 = 2 \text{ with a remainder of } 3 \quad \text{so the mixed number is } 2\frac{3}{4}$$

**Improper fractions to mixed numbers**

- |                            |                            |                            |                            |
|----------------------------|----------------------------|----------------------------|----------------------------|
| 21) $\frac{14}{3} =$ _____ | 26) $\frac{17}{5} =$ _____ | 31) $\frac{12}{5} =$ _____ | 36) $\frac{13}{5} =$ _____ |
| 22) $\frac{8}{4} =$ _____  | 27) $\frac{12}{4} =$ _____ | 32) $\frac{18}{4} =$ _____ | 37) $\frac{13}{4} =$ _____ |
| 23) $\frac{10}{5} =$ _____ | 28) $\frac{8}{2} =$ _____  | 33) $\frac{16}{5} =$ _____ | 38) $\frac{16}{3} =$ _____ |
| 24) $\frac{15}{4} =$ _____ | 29) $\frac{11}{3} =$ _____ | 34) $\frac{24}{5} =$ _____ | 39) $\frac{16}{4} =$ _____ |
| 25) $\frac{19}{3} =$ _____ | 30) $\frac{10}{6} =$ _____ | 35) $\frac{10}{4} =$ _____ | 40) $\frac{11}{2} =$ _____ |

**Revision**

- |                     |                     |                      |                      |
|---------------------|---------------------|----------------------|----------------------|
| 41) $7 + 2 =$ _____ | 46) $4 + 8 =$ _____ | 51) $13 - 5 =$ _____ | 56) $8 - 2 =$ _____  |
| 42) $7 + 3 =$ _____ | 47) $8 + 6 =$ _____ | 52) $11 - 4 =$ _____ | 57) $12 - 4 =$ _____ |
| 43) $9 + 2 =$ _____ | 48) $5 + 7 =$ _____ | 53) $18 - 9 =$ _____ | 58) $19 - 9 =$ _____ |
| 44) $6 + 8 =$ _____ | 49) $4 + 4 =$ _____ | 54) $9 - 7 =$ _____  | 59) $8 - 6 =$ _____  |
| 45) $5 + 5 =$ _____ | 50) $5 + 3 =$ _____ | 55) $13 - 6 =$ _____ | 60) $10 - 0 =$ _____ |

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Equivalent Fractions: 3 [ A ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Equivalent Fractions:**

Equivalent fractions represent the same amount even though they have different numerators and denominators.

For example:

$$\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$$

To make an equivalent fraction you have to multiply or divide the numerator and denominator by the same number.

$$\frac{2}{3} = \frac{2 \times 3}{3 \times 3} = \frac{6}{9}$$

$$\frac{15}{25} = \frac{15 \div 5}{25 \div 5} = \frac{3}{5}$$

**Equivalent Fractions**

1)  $\frac{1}{3} = \frac{7}{21}$

6)  $\frac{1}{5} = \frac{10}{50}$

11)  $\frac{5}{6} = \frac{25}{30}$

16)  $\frac{4}{5} = \frac{24}{30}$

2)  $\frac{2}{4} = \frac{6}{12}$

7)  $\frac{1}{3} = \frac{9}{27}$

12)  $\frac{5}{6} = \frac{35}{42}$

17)  $\frac{3}{8} = \frac{30}{80}$

3)  $\frac{1}{2} = \frac{2}{4}$

8)  $\frac{3}{4} = \frac{6}{8}$

13)  $\frac{3}{8} = \frac{3}{16}$

18)  $\frac{1}{4} = \frac{3}{12}$

4)  $\frac{2}{4} = \frac{14}{28}$

9)  $\frac{4}{5} = \frac{16}{20}$

14)  $\frac{1}{4} = \frac{7}{28}$

19)  $\frac{1}{4} = \frac{7}{28}$

5)  $\frac{1}{6} = \frac{9}{54}$

10)  $\frac{4}{5} = \frac{28}{35}$

15)  $\frac{8}{10} = \frac{28}{35}$

20)  $\frac{1}{5} = \frac{6}{30}$

**Multiplying fractions by whole numbers**

21)  $\frac{1}{9}$  of 81 = \_\_\_\_\_

26)  $\frac{1}{6}$  of 30 = \_\_\_\_\_

22)  $\frac{3}{9}$  of 81 = \_\_\_\_\_

27)  $\frac{4}{6}$  of 30 = \_\_\_\_\_

23)  $\frac{1}{10}$  of 50 = \_\_\_\_\_

28)  $\frac{1}{6}$  of 54 = \_\_\_\_\_

24)  $\frac{6}{10}$  of 50 = \_\_\_\_\_

29)  $\frac{1}{4}$  of 36 = \_\_\_\_\_

25)  $\frac{1}{6}$  of 18 = \_\_\_\_\_

30)  $\frac{3}{4}$  of 36 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

31)  $35 \times \frac{1}{7} =$  \_\_\_\_\_

36)  $32 \times \frac{2}{4} =$  \_\_\_\_\_

32)  $35 \times \frac{5}{7} =$  \_\_\_\_\_

37)  $24 \times \frac{3}{4} =$  \_\_\_\_\_

33)  $8 \times \frac{1}{2} =$  \_\_\_\_\_

38)  $10 \times \frac{1}{10} =$  \_\_\_\_\_

34)  $27 \times \frac{1}{3} =$  \_\_\_\_\_

39)  $36 \times \frac{7}{9} =$  \_\_\_\_\_

35)  $28 \times \frac{3}{4} =$  \_\_\_\_\_

40)  $6 \times \frac{5}{6} =$  \_\_\_\_\_

**Revision**

41)  $8 + 4 =$  \_\_\_\_\_

46)  $7 + 7 =$  \_\_\_\_\_

51)  $13 - 7 =$  \_\_\_\_\_

56)  $6 - 3 =$  \_\_\_\_\_

42)  $9 + 4 =$  \_\_\_\_\_

47)  $7 + 6 =$  \_\_\_\_\_

52)  $5 - 3 =$  \_\_\_\_\_

57)  $16 - 7 =$  \_\_\_\_\_

43)  $8 + 7 =$  \_\_\_\_\_

48)  $9 + 8 =$  \_\_\_\_\_

53)  $15 - 7 =$  \_\_\_\_\_

58)  $11 - 4 =$  \_\_\_\_\_

44)  $9 + 7 =$  \_\_\_\_\_

49)  $9 + 9 =$  \_\_\_\_\_

54)  $16 - 9 =$  \_\_\_\_\_

59)  $20 - 10 =$  \_\_\_\_\_

45)  $5 + 8 =$  \_\_\_\_\_

50)  $6 + 2 =$  \_\_\_\_\_

55)  $19 - 9 =$  \_\_\_\_\_

60)  $7 - 4 =$  \_\_\_\_\_

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Equivalent Fractions: 3 [ B ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Equivalent fractions**

1)  $\frac{1}{2} = \frac{3}{6}$

6)  $\frac{4}{8} = \frac{8}{16}$

11)  $\frac{1}{3} = \frac{8}{24}$

16)  $\frac{1}{2} = \frac{5}{10}$

2)  $\frac{2}{4} = \frac{8}{16}$

7)  $\frac{3}{6} = \frac{30}{60}$

12)  $\frac{1}{4} = \frac{9}{36}$

17)  $\frac{2}{5} = \frac{6}{15}$

3)  $\frac{3}{6} = \frac{7}{14}$

8)  $\frac{2}{3} = \frac{8}{12}$

13)  $\frac{1}{2} = \frac{5}{10}$

18)  $\frac{3}{6} = \frac{1}{2}$

4)  $\frac{5}{8} = \frac{10}{16}$

9)  $\frac{3}{6} = \frac{1}{2}$

14)  $\frac{1}{4} = \frac{2}{8}$

19)  $\frac{3}{4} = \frac{18}{24}$

5)  $\frac{1}{6} = \frac{2}{12}$

10)  $\frac{1}{2} = \frac{6}{12}$

15)  $\frac{3}{5} = \frac{6}{10}$

20)  $\frac{1}{2} = \frac{5}{10}$

**Multiplying fractions by whole numbers**

21)  $\frac{1}{6}$  of 36 = \_\_\_\_\_

26)  $\frac{1}{7}$  of 35 = \_\_\_\_\_

22)  $\frac{4}{6}$  of 36 = \_\_\_\_\_

27)  $\frac{2}{7}$  of 35 = \_\_\_\_\_

23)  $\frac{1}{6}$  of 30 = \_\_\_\_\_

28)  $\frac{1}{8}$  of 32 = \_\_\_\_\_

24)  $\frac{5}{6}$  of 30 = \_\_\_\_\_

29)  $\frac{4}{8}$  of 32 = \_\_\_\_\_

25)  $\frac{1}{2}$  of 18 = \_\_\_\_\_

30)  $\frac{1}{8}$  of 16 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

31)  $12 \times \frac{1}{2} =$  \_\_\_\_\_

36)  $40 \times \frac{1}{5} =$  \_\_\_\_\_

32)  $45 \times \frac{1}{5} =$  \_\_\_\_\_

37)  $40 \times \frac{3}{5} =$  \_\_\_\_\_

33)  $45 \times \frac{4}{5} =$  \_\_\_\_\_

38)  $35 \times \frac{1}{5} =$  \_\_\_\_\_

34)  $32 \times \frac{1}{4} =$  \_\_\_\_\_

39)  $35 \times \frac{4}{5} =$  \_\_\_\_\_

35)  $32 \times \frac{3}{4} =$  \_\_\_\_\_

40)  $32 \times \frac{1}{8} =$  \_\_\_\_\_

**Revision**

41)  $5 + 8 =$  \_\_\_\_\_

46)  $4 + 3 =$  \_\_\_\_\_

51)  $16 - 6 =$  \_\_\_\_\_

56)  $18 - 8 =$  \_\_\_\_\_

42)  $4 + 2 =$  \_\_\_\_\_

47)  $9 + 7 =$  \_\_\_\_\_

52)  $7 - 5 =$  \_\_\_\_\_

57)  $15 - 6 =$  \_\_\_\_\_

43)  $5 + 4 =$  \_\_\_\_\_

48)  $8 + 9 =$  \_\_\_\_\_

53)  $14 - 8 =$  \_\_\_\_\_

58)  $16 - 9 =$  \_\_\_\_\_

44)  $4 + 6 =$  \_\_\_\_\_

49)  $5 + 2 =$  \_\_\_\_\_

54)  $7 - 3 =$  \_\_\_\_\_

59)  $18 - 10 =$  \_\_\_\_\_

45)  $8 + 2 =$  \_\_\_\_\_

50)  $6 + 5 =$  \_\_\_\_\_

55)  $18 - 9 =$  \_\_\_\_\_

60)  $14 - 6 =$  \_\_\_\_\_

**Improper Fractions to Mixed Numbers**

61)  $\frac{10}{4} =$  \_\_\_\_\_

65)  $\frac{52}{10} =$  \_\_\_\_\_

62)  $\frac{36}{6} =$  \_\_\_\_\_

66)  $\frac{17}{6} =$  \_\_\_\_\_

63)  $\frac{15}{8} =$  \_\_\_\_\_

67)  $\frac{22}{9} =$  \_\_\_\_\_

64)  $\frac{35}{9} =$  \_\_\_\_\_

68)  $\frac{34}{8} =$  \_\_\_\_\_

**Mixed Numbers to Improper Fractions**

69)  $2 \frac{3}{5} =$  \_\_\_\_\_

73)  $7 \frac{7}{10} =$  \_\_\_\_\_

70)  $8 = \frac{\quad}{10}$

74)  $6 \frac{2}{3} =$  \_\_\_\_\_

71)  $4 \frac{1}{6} =$  \_\_\_\_\_

75)  $9 \frac{2}{10} =$  \_\_\_\_\_

72)  $3 \frac{8}{10} =$  \_\_\_\_\_

76)  $10 = \frac{\quad}{4}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Equivalent Fractions: 3 [ C ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Equivalent Fractions**

1)  $\frac{3}{\quad} = \frac{18}{30}$

6)  $\frac{5}{\quad} = \frac{10}{16}$

11)  $\frac{1}{2} = \frac{6}{\quad}$

16)  $\frac{2}{\quad} = \frac{8}{16}$

2)  $\frac{2}{3} = \frac{18}{\quad}$

7)  $\frac{\quad}{4} = \frac{18}{24}$

12)  $\frac{2}{4} = \frac{4}{\quad}$

17)  $\frac{\quad}{5} = \frac{36}{45}$

3)  $\frac{\quad}{2} = \frac{8}{16}$

8)  $\frac{\quad}{5} = \frac{8}{20}$

13)  $\frac{\quad}{5} = \frac{7}{35}$

18)  $\frac{2}{5} = \frac{\quad}{15}$

4)  $\frac{2}{3} = \frac{16}{\quad}$

9)  $\frac{5}{\quad} = \frac{30}{48}$

14)  $\frac{4}{6} = \frac{\quad}{12}$

19)  $\frac{3}{5} = \frac{15}{\quad}$

5)  $\frac{\quad}{4} = \frac{12}{24}$

10)  $\frac{3}{6} = \frac{\quad}{54}$

15)  $\frac{\quad}{3} = \frac{2}{6}$

20)  $\frac{\quad}{6} = \frac{12}{24}$

**Multiplying fractions by whole numbers**

21)  $\frac{5}{7}$  of 28 = \_\_\_\_\_

26)  $\frac{3}{5}$  of 45 = \_\_\_\_\_

22)  $\frac{1}{3}$  of 21 = \_\_\_\_\_

27)  $\frac{6}{10}$  of 30 = \_\_\_\_\_

23)  $\frac{3}{8}$  of 56 = \_\_\_\_\_

28)  $\frac{4}{5}$  of 40 = \_\_\_\_\_

24)  $\frac{1}{8}$  of 32 = \_\_\_\_\_

29)  $\frac{1}{6}$  of 48 = \_\_\_\_\_

25)  $\frac{5}{6}$  of 12 = \_\_\_\_\_

30)  $\frac{3}{4}$  of 20 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

31)  $30 \times \frac{4}{6} =$  \_\_\_\_\_

36)  $42 \times \frac{4}{7} =$  \_\_\_\_\_

32)  $21 \times \frac{1}{7} =$  \_\_\_\_\_

37)  $32 \times \frac{5}{8} =$  \_\_\_\_\_

33)  $24 \times \frac{3}{6} =$  \_\_\_\_\_

38)  $40 \times \frac{7}{10} =$  \_\_\_\_\_

34)  $30 \times \frac{4}{6} =$  \_\_\_\_\_

39)  $27 \times \frac{2}{3} =$  \_\_\_\_\_

35)  $7 \times \frac{6}{7} =$  \_\_\_\_\_

40)  $16 \times \frac{5}{8} =$  \_\_\_\_\_

**Revision**

41)  $5 + 4 =$  \_\_\_\_\_

46)  $6 + 9 =$  \_\_\_\_\_

51)  $10 - 5 =$  \_\_\_\_\_

56)  $6 - 2 =$  \_\_\_\_\_

42)  $7 + 5 =$  \_\_\_\_\_

47)  $8 + 4 =$  \_\_\_\_\_

52)  $15 - 7 =$  \_\_\_\_\_

57)  $13 - 10 =$  \_\_\_\_\_

43)  $7 + 6 =$  \_\_\_\_\_

48)  $4 + 5 =$  \_\_\_\_\_

53)  $12 - 10 =$  \_\_\_\_\_

58)  $9 - 7 =$  \_\_\_\_\_

44)  $9 + 9 =$  \_\_\_\_\_

49)  $9 + 6 =$  \_\_\_\_\_

54)  $14 - 5 =$  \_\_\_\_\_

59)  $4 - 2 =$  \_\_\_\_\_

45)  $7 + 7 =$  \_\_\_\_\_

50)  $7 + 3 =$  \_\_\_\_\_

55)  $18 - 9 =$  \_\_\_\_\_

60)  $6 - 3 =$  \_\_\_\_\_

**Improper Fractions to Mixed Numbers**

61)  $\frac{12}{8} =$  \_\_\_\_\_

65)  $\frac{18}{10} =$  \_\_\_\_\_

62)  $\frac{18}{3} =$  \_\_\_\_\_

66)  $\frac{13}{6} =$  \_\_\_\_\_

63)  $\frac{11}{3} =$  \_\_\_\_\_

67)  $\frac{17}{9} =$  \_\_\_\_\_

64)  $\frac{25}{8} =$  \_\_\_\_\_

68)  $\frac{14}{3} =$  \_\_\_\_\_

**Mixed Numbers to Improper Fractions**

69)  $2\frac{3}{7} =$  \_\_\_\_\_

73)  $4\frac{9}{10} =$  \_\_\_\_\_

70)  $7 = \frac{\quad}{10}$

74)  $1\frac{3}{5} =$  \_\_\_\_\_

71)  $4\frac{1}{4} =$  \_\_\_\_\_

75)  $6\frac{5}{10} =$  \_\_\_\_\_

72)  $3\frac{1}{5} =$  \_\_\_\_\_

76)  $10 = \frac{\quad}{10}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Equivalent Fractions: 3 [ D ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Equivalent Fractions**

1)  $\frac{2}{3} = \frac{4}{6}$

6)  $\frac{5}{6} = \frac{5}{6}$

11)  $\frac{28}{8} = \frac{28}{32}$

16)  $\frac{1}{40} = \frac{1}{40}$

2)  $\frac{1}{2} = \frac{10}{20}$

7)  $\frac{24}{8} = \frac{24}{48}$

12)  $\frac{4}{5} = \frac{4}{25}$

17)  $\frac{3}{12} = \frac{6}{12}$

3)  $\frac{6}{8} = \frac{24}{32}$

8)  $\frac{24}{4} = \frac{24}{32}$

13)  $\frac{4}{5} = \frac{4}{50}$

18)  $\frac{5}{32} = \frac{20}{32}$

4)  $\frac{3}{60} = \frac{30}{60}$

9)  $\frac{1}{35} = \frac{7}{35}$

14)  $\frac{12}{4} = \frac{12}{24}$

19)  $\frac{1}{5} = \frac{30}{30}$

5)  $\frac{7}{2} = \frac{7}{14}$

10)  $\frac{4}{2} = \frac{4}{8}$

15)  $\frac{7}{5} = \frac{7}{5}$

20)  $\frac{2}{6} = \frac{36}{36}$

**Multiplying fractions by whole numbers**

21)  $\frac{7}{8}$  of 48 = \_\_\_\_\_

26)  $\frac{4}{5}$  of 25 = \_\_\_\_\_

22)  $\frac{4}{6}$  of 36 = \_\_\_\_\_

27)  $\frac{3}{7}$  of 21 = \_\_\_\_\_

23)  $\frac{2}{7}$  of 14 = \_\_\_\_\_

28)  $\frac{1}{9}$  of 45 = \_\_\_\_\_

24)  $\frac{6}{8}$  of 16 = \_\_\_\_\_

29)  $\frac{2}{7}$  of 42 = \_\_\_\_\_

25)  $\frac{3}{10}$  of 10 = \_\_\_\_\_

30)  $\frac{8}{9}$  of 81 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

31)  $12 \times \frac{1}{2} =$  \_\_\_\_\_

36)  $21 \times \frac{5}{7} =$  \_\_\_\_\_

32)  $36 \times \frac{7}{9} =$  \_\_\_\_\_

37)  $72 \times \frac{4}{9} =$  \_\_\_\_\_

33)  $18 \times \frac{2}{6} =$  \_\_\_\_\_

38)  $42 \times \frac{1}{7} =$  \_\_\_\_\_

34)  $12 \times \frac{1}{2} =$  \_\_\_\_\_

39)  $40 \times \frac{3}{10} =$  \_\_\_\_\_

35)  $64 \times \frac{3}{8} =$  \_\_\_\_\_

40)  $10 \times \frac{9}{10} =$  \_\_\_\_\_

**Revision**

41)  $8 + 5 =$  \_\_\_\_\_

46)  $9 + 2 =$  \_\_\_\_\_

51)  $17 - 9 =$  \_\_\_\_\_

56)  $19 - 10 =$  \_\_\_\_\_

42)  $7 + 5 =$  \_\_\_\_\_

47)  $4 + 8 =$  \_\_\_\_\_

52)  $19 - 9 =$  \_\_\_\_\_

57)  $16 - 9 =$  \_\_\_\_\_

43)  $7 + 4 =$  \_\_\_\_\_

48)  $7 + 2 =$  \_\_\_\_\_

53)  $6 - 4 =$  \_\_\_\_\_

58)  $14 - 5 =$  \_\_\_\_\_

44)  $4 + 6 =$  \_\_\_\_\_

49)  $9 + 5 =$  \_\_\_\_\_

54)  $12 - 8 =$  \_\_\_\_\_

59)  $13 - 9 =$  \_\_\_\_\_

45)  $7 + 8 =$  \_\_\_\_\_

50)  $5 + 6 =$  \_\_\_\_\_

55)  $18 - 9 =$  \_\_\_\_\_

60)  $9 - 2 =$  \_\_\_\_\_

**Improper Fractions to Mixed Numbers**

61)  $\frac{12}{5} =$  \_\_\_\_\_

65)  $\frac{13}{3} =$  \_\_\_\_\_

62)  $\frac{12}{6} =$  \_\_\_\_\_

66)  $\frac{14}{3} =$  \_\_\_\_\_

63)  $\frac{12}{8} =$  \_\_\_\_\_

67)  $\frac{21}{9} =$  \_\_\_\_\_

64)  $\frac{24}{9} =$  \_\_\_\_\_

68)  $\frac{11}{8} =$  \_\_\_\_\_

**Mixed Numbers to Improper Fractions**

69)  $4 \frac{1}{3} =$  \_\_\_\_\_

73)  $1 \frac{1}{5} =$  \_\_\_\_\_

70)  $5 = \frac{\quad}{5}$

74)  $6 \frac{6}{10} =$  \_\_\_\_\_

71)  $5 \frac{2}{10} =$  \_\_\_\_\_

75)  $2 \frac{3}{12} =$  \_\_\_\_\_

72)  $3 \frac{1}{3} =$  \_\_\_\_\_

76)  $11 = \frac{\quad}{10}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Simplifying Fractions: 4 [ A ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Simplifying Fractions:**

Simplifying a fraction means to make an equivalent fraction which has numbers as small as possible.

To do this, find the equivalent fraction with the smallest numbers. This means dividing the numerator and denominator with common factors.

For example:  $\frac{3}{9} = \frac{1}{3}$ In some cases a fraction can be simplified even further if you look harder.  $\frac{6}{12} = \frac{3}{6} = \frac{1}{2}$ **Simplify these fractions**

1)  $\frac{3}{9} =$  \_\_\_\_\_

6)  $\frac{9}{12} =$  \_\_\_\_\_

11)  $\frac{6}{18} =$  \_\_\_\_\_

16)  $\frac{15}{18} =$  \_\_\_\_\_

2)  $\frac{20}{25} =$  \_\_\_\_\_

7)  $\frac{12}{30} =$  \_\_\_\_\_

12)  $\frac{10}{15} =$  \_\_\_\_\_

17)  $\frac{6}{36} =$  \_\_\_\_\_

3)  $\frac{3}{12} =$  \_\_\_\_\_

8)  $\frac{24}{30} =$  \_\_\_\_\_

13)  $\frac{3}{12} =$  \_\_\_\_\_

18)  $\frac{12}{15} =$  \_\_\_\_\_

4)  $\frac{10}{12} =$  \_\_\_\_\_

9)  $\frac{18}{24} =$  \_\_\_\_\_

14)  $\frac{8}{10} =$  \_\_\_\_\_

19)  $\frac{24}{30} =$  \_\_\_\_\_

5)  $\frac{18}{27} =$  \_\_\_\_\_

10)  $\frac{4}{24} =$  \_\_\_\_\_

15)  $\frac{12}{30} =$  \_\_\_\_\_

20)  $\frac{4}{16} =$  \_\_\_\_\_

**Multiplying fractions by whole numbers**

21)  $\frac{1}{5}$  of 20 = \_\_\_\_\_

26)  $\frac{8}{9}$  of 45 = \_\_\_\_\_

22)  $\frac{5}{10}$  of 20 = \_\_\_\_\_

27)  $\frac{6}{7}$  of 21 = \_\_\_\_\_

23)  $\frac{2}{3}$  of 27 = \_\_\_\_\_

28)  $\frac{2}{7}$  of 14 = \_\_\_\_\_

24)  $\frac{5}{7}$  of 35 = \_\_\_\_\_

29)  $\frac{2}{5}$  of 40 = \_\_\_\_\_

25)  $\frac{2}{3}$  of 6 = \_\_\_\_\_

30)  $\frac{2}{9}$  of 18 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

31)  $27 \times \frac{7}{9} =$  \_\_\_\_\_

36)  $27 \times \frac{8}{9} =$  \_\_\_\_\_

32)  $6 \times \frac{5}{6} =$  \_\_\_\_\_

37)  $45 \times \frac{5}{9} =$  \_\_\_\_\_

33)  $36 \times \frac{3}{6} =$  \_\_\_\_\_

38)  $9 \times \frac{5}{9} =$  \_\_\_\_\_

34)  $20 \times \frac{7}{10} =$  \_\_\_\_\_

39)  $32 \times \frac{1}{8} =$  \_\_\_\_\_

35)  $15 \times \frac{2}{3} =$  \_\_\_\_\_

40)  $18 \times \frac{1}{2} =$  \_\_\_\_\_

**Revision**

41)  $4 + 3 =$  \_\_\_\_\_

46)  $6 + 4 =$  \_\_\_\_\_

51)  $16 - 8 =$  \_\_\_\_\_

56)  $13 - 9 =$  \_\_\_\_\_

42)  $4 + 7 =$  \_\_\_\_\_

47)  $5 + 2 =$  \_\_\_\_\_

52)  $11 - 3 =$  \_\_\_\_\_

57)  $13 - 3 =$  \_\_\_\_\_

43)  $4 + 9 =$  \_\_\_\_\_

48)  $9 + 6 =$  \_\_\_\_\_

53)  $5 - 3 =$  \_\_\_\_\_

58)  $14 - 6 =$  \_\_\_\_\_

44)  $9 + 3 =$  \_\_\_\_\_

49)  $7 + 6 =$  \_\_\_\_\_

54)  $18 - 10 =$  \_\_\_\_\_

59)  $4 - 2 =$  \_\_\_\_\_

45)  $5 + 8 =$  \_\_\_\_\_

50)  $6 + 6 =$  \_\_\_\_\_

55)  $13 - 7 =$  \_\_\_\_\_

60)  $20 - 10 =$  \_\_\_\_\_

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Simplifying Fractions: 4 [ B ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	<b>simplify</b>	+/- common	decimals	revision

**Simplifying Improper Fractions:**

First simplify the improper fraction. This makes the numbers smaller to work with.  
Then turn the improper fraction into a mixed number.

For example:  $\frac{55}{30} \frac{11}{6} = 1 \frac{5}{6}$

**Simplify these fractions**

- |                            |                             |                             |                             |
|----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 1) $\frac{42}{20} =$ _____ | 7) $\frac{42}{15} =$ _____  | 13) $\frac{36}{32} =$ _____ | 19) $\frac{35}{10} =$ _____ |
| 2) $\frac{20}{12} =$ _____ | 8) $\frac{24}{16} =$ _____  | 14) $\frac{4}{6} =$ _____   | 20) $\frac{6}{18} =$ _____  |
| 3) $\frac{5}{2} =$ _____   | 9) $\frac{15}{6} =$ _____   | 15) $\frac{27}{18} =$ _____ | 21) $\frac{18}{36} =$ _____ |
| 4) $\frac{14}{6} =$ _____  | 10) $\frac{16}{12} =$ _____ | 16) $\frac{20}{25} =$ _____ | 22) $\frac{12}{16} =$ _____ |
| 5) $\frac{60}{30} =$ _____ | 11) $\frac{25}{10} =$ _____ | 17) $\frac{21}{15} =$ _____ | 23) $\frac{32}{12} =$ _____ |
| 6) $\frac{40}{32} =$ _____ | 12) $\frac{15}{12} =$ _____ | 18) $\frac{4}{12} =$ _____  | 24) $\frac{2}{6} =$ _____   |

**Multiplying fractions by whole numbers**

- |                                  |                                 |
|----------------------------------|---------------------------------|
| 25) $\frac{5}{7}$ of 35 = _____  | 30) $\frac{6}{9}$ of 9 = _____  |
| 26) $\frac{1}{2}$ of 12 = _____  | 31) $\frac{2}{4}$ of 40 = _____ |
| 27) $\frac{2}{5}$ of 45 = _____  | 32) $\frac{1}{2}$ of 6 = _____  |
| 28) $\frac{4}{10}$ of 10 = _____ | 33) $\frac{3}{4}$ of 32 = _____ |
| 29) $\frac{3}{4}$ of 36 = _____  | 34) $\frac{1}{3}$ of 18 = _____ |

**Multiplying whole numbers by fractions**

- |                                      |                                     |
|--------------------------------------|-------------------------------------|
| 35) $40 \times \frac{8}{10} =$ _____ | 40) $4 \times \frac{1}{2} =$ _____  |
| 36) $30 \times \frac{3}{10} =$ _____ | 41) $40 \times \frac{2}{4} =$ _____ |
| 37) $24 \times \frac{2}{3} =$ _____  | 42) $6 \times \frac{1}{2} =$ _____  |
| 38) $16 \times \frac{3}{8} =$ _____  | 43) $32 \times \frac{6}{8} =$ _____ |
| 39) $12 \times \frac{2}{3} =$ _____  | 44) $14 \times \frac{3}{7} =$ _____ |

**Revision**

- |                     |                     |                      |                      |
|---------------------|---------------------|----------------------|----------------------|
| 45) $8 + 2 =$ _____ | 50) $4 + 8 =$ _____ | 55) $11 - 4 =$ _____ | 60) $10 - 5 =$ _____ |
| 46) $8 + 5 =$ _____ | 51) $6 + 5 =$ _____ | 56) $13 - 8 =$ _____ | 61) $12 - 8 =$ _____ |
| 47) $5 + 3 =$ _____ | 52) $7 + 7 =$ _____ | 57) $4 - 2 =$ _____  | 62) $19 - 9 =$ _____ |
| 48) $5 + 9 =$ _____ | 53) $5 + 8 =$ _____ | 58) $9 - 7 =$ _____  | 63) $7 - 5 =$ _____  |
| 49) $9 + 7 =$ _____ | 54) $4 + 2 =$ _____ | 59) $11 - 5 =$ _____ | 64) $18 - 8 =$ _____ |

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Simplifying Fractions: 4 [ C ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Simplify these fractions**

- |                            |                            |                             |                             |
|----------------------------|----------------------------|-----------------------------|-----------------------------|
| 1) $\frac{15}{9} =$ _____  | 6) $\frac{55}{40} =$ _____ | 11) $\frac{15}{18} =$ _____ | 16) $\frac{18}{9} =$ _____  |
| 2) $\frac{55}{50} =$ _____ | 7) $\frac{15}{12} =$ _____ | 12) $\frac{10}{25} =$ _____ | 17) $\frac{15}{6} =$ _____  |
| 3) $\frac{28}{12} =$ _____ | 8) $\frac{56}{32} =$ _____ | 13) $\frac{10}{8} =$ _____  | 18) $\frac{18}{12} =$ _____ |
| 4) $\frac{42}{18} =$ _____ | 9) $\frac{24}{30} =$ _____ | 14) $\frac{28}{16} =$ _____ | 19) $\frac{27}{12} =$ _____ |
| 5) $\frac{15}{24} =$ _____ | 10) $\frac{14}{8} =$ _____ | 15) $\frac{30}{15} =$ _____ | 20) $\frac{35}{15} =$ _____ |

**Equivalent Fractions**

- |                                      |                                       |                                       |                                       |
|--------------------------------------|---------------------------------------|---------------------------------------|---------------------------------------|
| 21) $\frac{6}{8} = \frac{12}{\quad}$ | 25) $\frac{1}{4} = \frac{6}{\quad}$   | 29) $\frac{5}{\quad} = \frac{40}{48}$ | 33) $\frac{1}{2} = \frac{3}{\quad}$   |
| 22) $\frac{1}{6} = \frac{5}{\quad}$  | 26) $\frac{2}{\quad} = \frac{16}{32}$ | 30) $\frac{1}{5} = \frac{5}{\quad}$   | 34) $\frac{2}{\quad} = \frac{4}{10}$  |
| 23) $\frac{2}{4} = \frac{\quad}{12}$ | 27) $\frac{1}{2} = \frac{\quad}{4}$   | 31) $\frac{4}{6} = \frac{20}{\quad}$  | 35) $\frac{2}{6} = \frac{\quad}{54}$  |
| 24) $\frac{1}{2} = \frac{9}{\quad}$  | 28) $\frac{1}{3} = \frac{4}{\quad}$   | 32) $\frac{1}{\quad} = \frac{6}{12}$  | 36) $\frac{1}{\quad} = \frac{10}{20}$ |

**Multiplying fractions by whole numbers**

- |                                 |                                 |
|---------------------------------|---------------------------------|
| 37) $\frac{1}{3}$ of 27 = _____ | 41) $\frac{2}{3}$ of 18 = _____ |
| 38) $\frac{4}{7}$ of 21 = _____ | 42) $\frac{3}{8}$ of 24 = _____ |
| 39) $\frac{1}{5}$ of 30 = _____ | 43) $\frac{2}{3}$ of 15 = _____ |
| 40) $\frac{7}{8}$ of 40 = _____ | 44) $\frac{2}{5}$ of 15 = _____ |

**Multiplying whole numbers by fractions**

- |                                      |                                      |
|--------------------------------------|--------------------------------------|
| 45) $27 \times \frac{1}{9} =$ _____  | 49) $15 \times \frac{1}{3} =$ _____  |
| 46) $18 \times \frac{5}{9} =$ _____  | 50) $20 \times \frac{3}{10} =$ _____ |
| 47) $30 \times \frac{2}{10} =$ _____ | 51) $16 \times \frac{5}{8} =$ _____  |
| 48) $40 \times \frac{9}{10} =$ _____ | 52) $45 \times \frac{8}{9} =$ _____  |

**Revision**

- |                     |                     |                       |                      |
|---------------------|---------------------|-----------------------|----------------------|
| 53) $4 + 4 =$ _____ | 57) $8 + 8 =$ _____ | 61) $10 - 1 =$ _____  | 65) $7 - 5 =$ _____  |
| 54) $8 + 5 =$ _____ | 58) $7 + 3 =$ _____ | 62) $19 - 9 =$ _____  | 66) $13 - 9 =$ _____ |
| 55) $4 + 7 =$ _____ | 59) $8 + 9 =$ _____ | 63) $12 - 7 =$ _____  | 67) $11 - 5 =$ _____ |
| 56) $5 + 6 =$ _____ | 60) $4 + 2 =$ _____ | 64) $20 - 10 =$ _____ | 68) $15 - 5 =$ _____ |

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Simplifying Fractions: 4 [ D ]



x imp/mixed	equivalent simplify	compare +/- common	+/- mixed decimals	adv decimals revision
----------------	------------------------	-----------------------	-----------------------	--------------------------

**Simplify these fractions**

- |                            |                            |                             |                             |
|----------------------------|----------------------------|-----------------------------|-----------------------------|
| 1) $\frac{14}{8} =$ _____  | 6) $\frac{45}{40} =$ _____ | 11) $\frac{18}{15} =$ _____ | 16) $\frac{4}{24} =$ _____  |
| 2) $\frac{42}{32} =$ _____ | 7) $\frac{28}{24} =$ _____ | 12) $\frac{32}{24} =$ _____ | 17) $\frac{80}{40} =$ _____ |
| 3) $\frac{12}{16} =$ _____ | 8) $\frac{8}{20} =$ _____  | 13) $\frac{9}{18} =$ _____  | 18) $\frac{2}{8} =$ _____   |
| 4) $\frac{6}{20} =$ _____  | 9) $\frac{16}{8} =$ _____  | 14) $\frac{36}{48} =$ _____ | 19) $\frac{24}{12} =$ _____ |
| 5) $\frac{25}{15} =$ _____ | 10) $\frac{6}{36} =$ _____ | 15) $\frac{30}{24} =$ _____ | 20) $\frac{40}{20} =$ _____ |

**Equivalent Fractions**

- |                                       |                                      |                                       |                                       |
|---------------------------------------|--------------------------------------|---------------------------------------|---------------------------------------|
| 21) $\frac{1}{2} = \frac{\quad}{8}$   | 25) $\frac{\quad}{4} = \frac{6}{24}$ | 29) $\frac{1}{\quad} = \frac{4}{12}$  | 33) $\frac{1}{4} = \frac{7}{\quad}$   |
| 22) $\frac{1}{\quad} = \frac{10}{30}$ | 26) $\frac{1}{8} = \frac{8}{\quad}$  | 30) $\frac{\quad}{6} = \frac{2}{12}$  | 34) $\frac{1}{3} = \frac{2}{\quad}$   |
| 23) $\frac{\quad}{6} = \frac{30}{60}$ | 27) $\frac{2}{5} = \frac{10}{\quad}$ | 31) $\frac{2}{4} = \frac{4}{\quad}$   | 35) $\frac{2}{6} = \frac{20}{\quad}$  |
| 24) $\frac{2}{4} = \frac{14}{\quad}$  | 28) $\frac{2}{8} = \frac{4}{\quad}$  | 32) $\frac{\quad}{5} = \frac{18}{45}$ | 36) $\frac{7}{\quad} = \frac{21}{24}$ |

**Multiplying fractions by whole numbers**

- |                                  |                                 |
|----------------------------------|---------------------------------|
| 37) $\frac{1}{4}$ of 16 = _____  | 41) $\frac{1}{7}$ of 7 = _____  |
| 38) $\frac{4}{7}$ of 21 = _____  | 42) $\frac{3}{7}$ of 14 = _____ |
| 39) $\frac{9}{10}$ of 30 = _____ | 43) $\frac{1}{2}$ of 12 = _____ |
| 40) $\frac{3}{8}$ of 8 = _____   | 44) $\frac{1}{4}$ of 36 = _____ |

**Multiplying whole numbers by fractions**

- |                                      |                                      |
|--------------------------------------|--------------------------------------|
| 45) $18 \times \frac{1}{6} =$ _____  | 49) $7 \times \frac{1}{7} =$ _____   |
| 46) $20 \times \frac{1}{2} =$ _____  | 50) $9 \times \frac{4}{9} =$ _____   |
| 47) $36 \times \frac{3}{4} =$ _____  | 51) $30 \times \frac{8}{10} =$ _____ |
| 48) $10 \times \frac{3}{10} =$ _____ | 52) $35 \times \frac{1}{5} =$ _____  |

**Revision**

- |                     |                     |                       |                     |
|---------------------|---------------------|-----------------------|---------------------|
| 53) $5 + 4 =$ _____ | 57) $6 + 3 =$ _____ | 61) $11 - 9 =$ _____  | 65) $5 - 3 =$ _____ |
| 54) $8 + 2 =$ _____ | 58) $9 + 4 =$ _____ | 62) $16 - 9 =$ _____  | 66) $6 - 3 =$ _____ |
| 55) $6 + 9 =$ _____ | 59) $6 + 6 =$ _____ | 63) $19 - 10 =$ _____ | 67) $7 - 3 =$ _____ |
| 56) $9 + 3 =$ _____ | 60) $8 + 6 =$ _____ | 64) $20 - 10 =$ _____ | 68) $9 - 6 =$ _____ |

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Comparing Fractions: 5 [ A ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Comparing Fractions:**

1) Fractions with the same denominators are easy to compare:  
the numerator tells you which fraction is larger:

$$\frac{3}{4} > \frac{2}{4}$$

2) When the denominators are different, find equivalent fractions  
with the same denominator (the Lowest Common Denominator)

$$\frac{3}{4} \square \frac{7}{8} \quad \frac{6}{8} \cancel{\frac{3}{4}} < \frac{7}{8}$$

3) Sometimes both fractions need changing to make the denominators  
the same:

$$\frac{3}{4} \square \frac{5}{6} \quad \frac{9}{12} \cancel{\frac{3}{4}} < \cancel{\frac{5}{6}} \frac{10}{12}$$

Or

4) Think of the size of the fraction. Is it smaller than a half?... or larger?  
Is it near a whole?... or nearer zero?

$$\frac{1}{4} \square \frac{7}{8}$$

Where does this fraction sit on a number line compared to the other fraction?

**Insert <, > or =**

1)  $\frac{5}{8} \square \frac{7}{8}$

6)  $\frac{3}{8} \square \frac{1}{2}$

11)  $\frac{2}{3} \square \frac{3}{6}$

16)  $\frac{4}{6} \square \frac{1}{6}$

2)  $\frac{1}{4} \square \frac{2}{4}$

7)  $\frac{7}{8} \square \frac{3}{8}$

12)  $\frac{11}{15} \square \frac{4}{5}$

17)  $\frac{3}{5} \square \frac{6}{10}$

3)  $\frac{2}{8} \square \frac{3}{4}$

8)  $\frac{4}{8} \square \frac{5}{8}$

13)  $\frac{3}{4} \square \frac{5}{6}$

18)  $\frac{2}{3} \square \frac{3}{5}$

4)  $\frac{1}{2} \square \frac{4}{8}$

9)  $\frac{6}{8} \square \frac{3}{4}$

14)  $\frac{2}{3} \square \frac{4}{6}$

19)  $\frac{3}{4} \square \frac{1}{3}$

5)  $\frac{1}{2} \square \frac{3}{6}$

10)  $\frac{2}{5} \square \frac{3}{10}$

15)  $\frac{3}{6} \square \frac{2}{4}$

20)  $\frac{1}{3} \square \frac{2}{4}$

**Equivalent fractions**

21)  $\frac{1}{3} = \frac{9}{27} = \frac{3}{9}$

24)  $\frac{1}{5} = \frac{2}{10} = \frac{10}{50}$

27)  $\frac{7}{8} = \frac{7}{8} = \frac{7}{8}$

30)  $\frac{7}{8} = \frac{7}{8} = \frac{7}{8}$

22)  $\frac{2}{3} = \frac{18}{27} = \frac{6}{9}$

25)  $\frac{1}{5} = \frac{7}{35} = \frac{8}{40}$

28)  $\frac{1}{2} = \frac{1}{2} = \frac{1}{2}$

31)  $\frac{1}{2} = \frac{7}{14} = \frac{1}{2}$

23)  $\frac{1}{3} = \frac{1}{3} = \frac{1}{3}$

26)  $\frac{5}{6} = \frac{30}{36} = \frac{40}{48}$

29)  $\frac{2}{8} = \frac{18}{72} = \frac{16}{64}$

32)  $\frac{4}{6} = \frac{4}{6} = \frac{4}{6}$

**Multiplying fractions by whole numbers**

33)  $\frac{3}{4}$  of 20 = \_\_\_\_\_

37)  $\frac{2}{4}$  of 32 = \_\_\_\_\_

34)  $\frac{4}{9}$  of 36 = \_\_\_\_\_

38)  $\frac{8}{10}$  of 10 = \_\_\_\_\_

35)  $\frac{2}{10}$  of 20 = \_\_\_\_\_

39)  $\frac{2}{5}$  of 45 = \_\_\_\_\_

36)  $\frac{3}{4}$  of 36 = \_\_\_\_\_

40)  $\frac{3}{6}$  of 24 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

41)  $18 \times \frac{2}{6} =$  \_\_\_\_\_

45)  $30 \times \frac{7}{10} =$  \_\_\_\_\_

42)  $12 \times \frac{2}{3} =$  \_\_\_\_\_

46)  $21 \times \frac{1}{7} =$  \_\_\_\_\_

43)  $42 \times \frac{3}{6} =$  \_\_\_\_\_

47)  $48 \times \frac{3}{8} =$  \_\_\_\_\_

44)  $36 \times \frac{6}{9} =$  \_\_\_\_\_

48)  $50 \times \frac{7}{10} =$  \_\_\_\_\_

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Comparing Fractions: 5 [ B ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Comparing Fractions with the Same Numerator:**

Use your knowledge of fractions to make comparing them easier.

When the numerators are the same, the denominator tells you which fraction is larger. For example, quarters/fourths are larger than fifths, so:

$$\frac{3}{4} > \frac{3}{5}$$

**Insert <, > or =**

1)  $\frac{1}{8}$  \_\_\_\_  $\frac{1}{3}$

6)  $\frac{2}{3}$  \_\_\_\_  $\frac{2}{4}$

11)  $\frac{6}{9}$  \_\_\_\_  $\frac{7}{9}$

16)  $\frac{2}{6}$  \_\_\_\_  $\frac{2}{3}$

2)  $\frac{2}{8}$  \_\_\_\_  $\frac{2}{3}$

7)  $\frac{2}{8}$  \_\_\_\_  $\frac{2}{3}$

12)  $\frac{2}{3}$  \_\_\_\_  $\frac{2}{4}$

17)  $\frac{2}{3}$  \_\_\_\_  $\frac{2}{5}$

3)  $\frac{1}{5}$  \_\_\_\_  $\frac{1}{8}$

8)  $\frac{7}{8}$  \_\_\_\_  $\frac{7}{10}$

13)  $\frac{3}{6}$  \_\_\_\_  $\frac{6}{12}$

18)  $\frac{1}{3}$  \_\_\_\_  $\frac{1}{6}$

4)  $\frac{4}{5}$  \_\_\_\_  $\frac{4}{8}$

9)  $\frac{1}{2}$  \_\_\_\_  $\frac{4}{8}$

14)  $\frac{4}{10}$  \_\_\_\_  $\frac{4}{5}$

19)  $\frac{1}{3}$  \_\_\_\_  $\frac{1}{6}$

5)  $\frac{2}{4}$  \_\_\_\_  $\frac{2}{5}$

10)  $\frac{2}{4}$  \_\_\_\_  $\frac{2}{8}$

15)  $\frac{4}{6}$  \_\_\_\_  $\frac{3}{4}$

20)  $\frac{2}{3}$  \_\_\_\_  $\frac{4}{6}$

**Simplify these fractions**

21)  $\frac{24}{16} =$  \_\_\_\_\_

24)  $\frac{8}{20} =$  \_\_\_\_\_

27)  $\frac{25}{10} =$  \_\_\_\_\_

30)  $\frac{12}{18} =$  \_\_\_\_\_

22)  $\frac{26}{12} =$  \_\_\_\_\_

25)  $\frac{16}{10} =$  \_\_\_\_\_

28)  $\frac{4}{16} =$  \_\_\_\_\_

31)  $\frac{24}{32} =$  \_\_\_\_\_

23)  $\frac{14}{6} =$  \_\_\_\_\_

26)  $\frac{4}{12} =$  \_\_\_\_\_

29)  $\frac{2}{8} =$  \_\_\_\_\_

32)  $\frac{50}{30} =$  \_\_\_\_\_

**Multiplying fractions by whole numbers**

33)  $\frac{6}{8}$  of 16 = \_\_\_\_\_

37)  $\frac{1}{4}$  of 8 = \_\_\_\_\_

34)  $\frac{1}{4}$  of 20 = \_\_\_\_\_

38)  $\frac{4}{8}$  of 8 = \_\_\_\_\_

35)  $\frac{1}{5}$  of 15 = \_\_\_\_\_

39)  $\frac{3}{4}$  of 24 = \_\_\_\_\_

36)  $\frac{4}{9}$  of 9 = \_\_\_\_\_

40)  $\frac{1}{7}$  of 28 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

41)  $24 \times \frac{3}{4} =$  \_\_\_\_\_

45)  $40 \times \frac{2}{5} =$  \_\_\_\_\_

42)  $10 \times \frac{6}{10} =$  \_\_\_\_\_

46)  $35 \times \frac{3}{5} =$  \_\_\_\_\_

43)  $40 \times \frac{1}{5} =$  \_\_\_\_\_

47)  $10 \times \frac{6}{10} =$  \_\_\_\_\_

44)  $10 \times \frac{7}{10} =$  \_\_\_\_\_

48)  $24 \times \frac{2}{3} =$  \_\_\_\_\_

**Revision**

49)  $7 + 5 =$  \_\_\_\_\_

53)  $4 + 3 =$  \_\_\_\_\_

57)  $7 - 3 =$  \_\_\_\_\_

61)  $10 - 4 =$  \_\_\_\_\_

50)  $8 + 4 =$  \_\_\_\_\_

54)  $5 + 2 =$  \_\_\_\_\_

58)  $8 - 4 =$  \_\_\_\_\_

62)  $13 - 6 =$  \_\_\_\_\_

51)  $5 + 5 =$  \_\_\_\_\_

55)  $6 + 3 =$  \_\_\_\_\_

59)  $10 - 1 =$  \_\_\_\_\_

63)  $12 - 9 =$  \_\_\_\_\_

52)  $6 + 4 =$  \_\_\_\_\_

56)  $9 + 7 =$  \_\_\_\_\_

60)  $14 - 5 =$  \_\_\_\_\_

64)  $16 - 6 =$  \_\_\_\_\_

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Comparing Fractions: 5 [ C ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Comparing Fractions:**

Think about how many whole numbers are contained in each of the improper fractions. You may not need to convert the fractions at all if the two whole numbers tell you one number is larger.

For example:

$$\frac{13}{4} \square \frac{7}{6}$$

$$\frac{13}{4} = 3 \text{ wholes and a fraction}$$

$$\frac{7}{6} = 1 \text{ whole and a fraction, so it is obvious:}$$

$$\frac{13}{4} > \frac{7}{6}$$

**Insert <, > or =**

1)  $\frac{5}{3} \square \frac{32}{10}$

6)  $\frac{2}{12} \square \frac{1}{6}$

11)  $\frac{2}{3} \square \frac{2}{5}$

16)  $\frac{1}{4} \square \frac{3}{4}$

2)  $\frac{8}{3} \square \frac{2}{6}$

7)  $\frac{8}{9} \square \frac{4}{6}$

12)  $\frac{12}{3} \square \frac{20}{5}$

17)  $\frac{3}{6} \square \frac{3}{5}$

3)  $\frac{13}{6} \square \frac{4}{3}$

8)  $\frac{10}{6} \square \frac{13}{12}$

13)  $\frac{21}{10} \square \frac{6}{5}$

18)  $\frac{11}{4} \square \frac{16}{5}$

4)  $\frac{14}{6} \square \frac{5}{8}$

9)  $\frac{10}{6} \square \frac{4}{6}$

14)  $\frac{9}{4} \square \frac{7}{6}$

19)  $\frac{3}{5} \square \frac{6}{10}$

5)  $\frac{7}{3} \square \frac{17}{5}$

10)  $\frac{6}{9} \square \frac{8}{6}$

15)  $\frac{3}{4} \square \frac{3}{5}$

20)  $\frac{3}{5} \square \frac{1}{3}$

**Equivalent fractions**

21)  $\frac{\quad}{5} = \frac{15}{25}$

23)  $\frac{6}{\quad} = \frac{18}{24}$

25)  $\frac{\quad}{5} = \frac{21}{35}$

27)  $\frac{3}{5} = \frac{6}{\quad}$

22)  $\frac{1}{\quad} = \frac{6}{12}$

24)  $\frac{1}{2} = \frac{\quad}{14}$

26)  $\frac{5}{8} = \frac{35}{\quad}$

28)  $\frac{3}{\quad} = \frac{9}{12}$

**Multiplying fractions by whole numbers**

29)  $\frac{5}{7}$  of 35 = \_\_\_\_\_

31)  $\frac{5}{10}$  of 10 = \_\_\_\_\_

30)  $\frac{4}{9}$  of 9 = \_\_\_\_\_

32)  $\frac{1}{2}$  of 16 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

33)  $32 \times \frac{1}{4} = \underline{\hspace{2cm}}$

35)  $24 \times \frac{3}{4} = \underline{\hspace{2cm}}$

34)  $36 \times \frac{4}{6} = \underline{\hspace{2cm}}$

36)  $30 \times \frac{2}{10} = \underline{\hspace{2cm}}$

**Improper Fractions to Mixed Numbers**

49)  $\frac{15}{4} = \underline{\hspace{2cm}}$

53)  $\frac{10}{3} = \underline{\hspace{2cm}}$

50)  $\frac{11}{2} = \underline{\hspace{2cm}}$

54)  $\frac{14}{2} = \underline{\hspace{2cm}}$

51)  $\frac{9}{8} = \underline{\hspace{2cm}}$

55)  $\frac{11}{5} = \underline{\hspace{2cm}}$

52)  $\frac{21}{5} = \underline{\hspace{2cm}}$

56)  $\frac{14}{4} = \underline{\hspace{2cm}}$

**Mixed Numbers to Improper Fractions**

57)  $5 \frac{1}{2} = \underline{\hspace{2cm}}$

61)  $1 \frac{1}{4} = \underline{\hspace{2cm}}$

58)  $3 = \frac{\quad}{4}$

62)  $2 \frac{4}{5} = \underline{\hspace{2cm}}$

59)  $4 \frac{7}{10} = \underline{\hspace{2cm}}$

63)  $2 \frac{2}{3} = \underline{\hspace{2cm}}$

60)  $2 \frac{1}{8} = \underline{\hspace{2cm}}$

64)  $3 = \frac{\quad}{5}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Comparing Fractions: 5 [ D ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Comparing Fractions:**

Comparing an improper fraction with a mixed number requires you to convert the improper to a mixed number before comparing. For example:

$$3\frac{2}{4} \square \frac{15}{4} \quad 3\frac{2}{4} \square \frac{15}{4} \quad 3\frac{3}{4} \quad \text{so} \quad 3\frac{2}{4} < 3\frac{3}{4}$$

Sometimes you may even need to find equivalent fractions as well before fractions can be compared.

For example:

$$2\frac{3}{4} \square \frac{16}{6} \quad \frac{9}{12} \quad 2\frac{8}{4} \square \frac{16}{6} \quad 2\frac{4}{6} \quad \frac{8}{12} \quad \text{so} \quad 2\frac{9}{12} > 2\frac{8}{12}$$

**Insert <, > or =**

1)  $2\frac{5}{9} \square \frac{20}{9}$

6)  $\frac{2}{12} \square \frac{2}{3}$

11)  $\frac{3}{5} \square \frac{2}{4}$

16)  $\frac{2}{3} \square \frac{2}{5}$

2)  $3\frac{2}{10} \square \frac{32}{10}$

7)  $2\frac{1}{3} \square \frac{21}{3}$

12)  $\frac{1}{3} \square \frac{1}{4}$

17)  $2\frac{1}{4} \square 2\frac{2}{3}$

3)  $\frac{20}{6} \square 3\frac{3}{6}$

8)  $1\frac{4}{9} \square \frac{13}{9}$

13)  $\frac{2}{4} \square \frac{2}{6}$

18)  $1\frac{3}{6} \square \frac{10}{6}$

4)  $\frac{4}{12} \square \frac{1}{3}$

9)  $\frac{11}{3} \square 3\frac{1}{3}$

14)  $\frac{2}{5} \square \frac{6}{15}$

19)  $\frac{3}{5} \square \frac{2}{3}$

5)  $\frac{7}{9} \square \frac{4}{9}$

10)  $\frac{4}{6} \square \frac{1}{6}$

15)  $2\frac{3}{4} \square \frac{12}{4}$

20)  $\frac{4}{6} \square \frac{1}{3}$

**Multiplying fractions by whole numbers**

21)  $\frac{1}{2}$  of 20 = \_\_\_\_\_

25)  $\frac{8}{9}$  of 9 = \_\_\_\_\_

22)  $\frac{2}{9}$  of 18 = \_\_\_\_\_

26)  $\frac{2}{8}$  of 40 = \_\_\_\_\_

23)  $\frac{2}{6}$  of 12 = \_\_\_\_\_

27)  $\frac{1}{4}$  of 20 = \_\_\_\_\_

24)  $\frac{2}{10}$  of 20 = \_\_\_\_\_

28)  $\frac{1}{3}$  of 15 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

29)  $35 \times \frac{2}{7} =$  \_\_\_\_\_

33)  $12 \times \frac{3}{4} =$  \_\_\_\_\_

30)  $14 \times \frac{3}{7} =$  \_\_\_\_\_

34)  $14 \times \frac{5}{7} =$  \_\_\_\_\_

31)  $21 \times \frac{2}{3} =$  \_\_\_\_\_

35)  $21 \times \frac{2}{3} =$  \_\_\_\_\_

32)  $28 \times \frac{1}{4} =$  \_\_\_\_\_

36)  $18 \times \frac{5}{6} =$  \_\_\_\_\_

**Improper Fractions to Mixed Numbers**

49)  $\frac{15}{6} =$  \_\_\_\_\_

53)  $\frac{10}{6} =$  \_\_\_\_\_

50)  $\frac{10}{3} =$  \_\_\_\_\_

54)  $\frac{16}{5} =$  \_\_\_\_\_

51)  $\frac{17}{8} =$  \_\_\_\_\_

55)  $\frac{13}{8} =$  \_\_\_\_\_

52)  $\frac{21}{10} =$  \_\_\_\_\_

56)  $\frac{13}{2} =$  \_\_\_\_\_

**Mixed Numbers to Improper Fractions**

57)  $4\frac{1}{3} =$  \_\_\_\_\_

61)  $4\frac{4}{6} =$  \_\_\_\_\_

58)  $3 = \frac{\quad}{3}$

62)  $2\frac{4}{8} =$  \_\_\_\_\_

59)  $6\frac{1}{10} =$  \_\_\_\_\_

63)  $5\frac{2}{4} =$  \_\_\_\_\_

60)  $2\frac{5}{9} =$  \_\_\_\_\_

64)  $3 = \frac{\quad}{4}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Adding Fractions: 6 [ A ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	<b>+/- common</b>	decimals	revision

**Adding Fractions with Common Denominators (horizontally):**

First check the denominators are the same.

Then add or subtract the numerators only. The denominators stay the same.

For example:  $\frac{5}{9} + \frac{2}{9} = \frac{7}{9}$

Change any improper fraction in the answer to a mixed number.

For example:  $\frac{6}{9} + \frac{5}{9} = \frac{11}{9} = 1\frac{2}{9}$

**Add the fractions**

- |  |   |  |   |
|--|---|--|---|
| 1) $\frac{2}{5} + \frac{2}{5} =$ _____   | 6) $\frac{7}{10} + \frac{2}{10} =$ _____  | 11) $\frac{2}{5} + \frac{4}{5} =$ _____    | 16) $\frac{3}{5} + \frac{2}{5} =$ _____   |
| 2) $\frac{2}{12} + \frac{9}{12} =$ _____ | 7) $\frac{1}{5} + \frac{1}{5} =$ _____    | 12) $\frac{4}{5} + \frac{3}{5} =$ _____    | 17) $\frac{9}{10} + \frac{1}{10} =$ _____ |
| 3) $\frac{1}{4} + \frac{2}{4} =$ _____   | 8) $\frac{2}{5} + \frac{2}{5} =$ _____    | 13) $\frac{2}{3} + \frac{1}{3} =$ _____    | 18) $\frac{1}{5} + \frac{2}{5} =$ _____   |
| 4) $\frac{4}{8} + \frac{1}{8} =$ _____   | 9) $\frac{3}{8} + \frac{4}{8} =$ _____    | 14) $\frac{2}{12} + \frac{11}{12} =$ _____ | 19) $\frac{5}{6} + \frac{4}{6} =$ _____   |
| 5) $\frac{2}{9} + \frac{2}{9} =$ _____   | 10) $\frac{4}{10} + \frac{2}{10} =$ _____ | 15) $\frac{6}{9} + \frac{1}{9} =$ _____    | 20) $\frac{7}{8} + \frac{6}{8} =$ _____   |

**Equivalent fractions**

- |                                  |                                  |                                  |                                  |
|----------------------------------|----------------------------------|----------------------------------|----------------------------------|
| 21) $\frac{1}{4} = \frac{3}{12}$ | 24) $\frac{1}{2} = \frac{3}{6}$  | 27) $\frac{1}{8} = \frac{3}{24}$ | 30) $\frac{2}{3} = \frac{4}{6}$  |
| 22) $\frac{3}{8} = \frac{9}{24}$ | 25) $\frac{1}{3} = \frac{2}{6}$  | 28) $\frac{1}{5} = \frac{2}{10}$ | 31) $\frac{1}{3} = \frac{2}{6}$  |
| 23) $\frac{1}{3} = \frac{2}{6}$  | 26) $\frac{1}{6} = \frac{2}{12}$ | 29) $\frac{3}{6} = \frac{1}{2}$  | 32) $\frac{1}{8} = \frac{2}{16}$ |

**Multiplying fractions by whole numbers**

- |                                 |                                 |
|---------------------------------|---------------------------------|
| 33) $\frac{4}{9}$ of 45 = _____ | 37) $\frac{1}{2}$ of 16 = _____ |
| 34) $\frac{2}{3}$ of 3 = _____  | 38) $\frac{1}{2}$ of 38 = _____ |
| 35) $\frac{5}{8}$ of 32 = _____ | 39) $\frac{1}{6}$ of 42 = _____ |
| 36) $\frac{1}{4}$ of 28 = _____ | 40) $\frac{2}{8}$ of 16 = _____ |

**Multiplying whole numbers by fractions**

- |                                      |                                      |
|--------------------------------------|--------------------------------------|
| 41) $36 \times \frac{3}{4} =$ _____  | 45) $20 \times \frac{5}{10} =$ _____ |
| 42) $7 \times \frac{4}{7} =$ _____   | 46) $42 \times \frac{5}{7} =$ _____  |
| 43) $9 \times \frac{1}{9} =$ _____   | 47) $27 \times \frac{2}{9} =$ _____  |
| 44) $20 \times \frac{6}{10} =$ _____ | 48) $15 \times \frac{3}{5} =$ _____  |

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Adding Fractions: 6 [ B ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Adding Fractions with Common Denominators (vertically):**

The addition of fractions can also be written horizontally.

For example:

$$\begin{array}{r} \frac{5}{8} \\ + \frac{2}{8} \\ \hline \frac{7}{8} \end{array} \quad \begin{array}{r} \frac{6}{9} \\ + \frac{7}{9} \\ \hline \frac{13}{9} \quad 1\frac{4}{9} \end{array}$$

**Add the fractions (vertically)**

1) $\frac{5}{10} + \frac{2}{10} =$	3) $\frac{2}{6} + \frac{3}{6} =$	5) $\frac{1}{12} + \frac{3}{12} =$	7) $\frac{7}{12} + \frac{6}{12} =$	9) $\frac{6}{8} + \frac{5}{8} =$	11) $\frac{4}{10} + \frac{7}{10} =$
------------------------------------	----------------------------------	------------------------------------	------------------------------------	----------------------------------	-------------------------------------

2) $\frac{1}{3} + \frac{1}{3} =$	4) $\frac{1}{10} + \frac{8}{10} =$	6) $\frac{6}{10} + \frac{3}{10} =$	8) $\frac{8}{9} + \frac{6}{9} =$	10) $\frac{4}{9} + \frac{7}{9} =$	12) $\frac{3}{8} + \frac{6}{8} =$
----------------------------------	------------------------------------	------------------------------------	----------------------------------	-----------------------------------	-----------------------------------

**Add the fractions (horizontally)**

13) $\frac{6}{10} + \frac{1}{10} =$	16) $\frac{2}{3} + \frac{1}{3} =$	19) $\frac{3}{6} + \frac{3}{6} =$	22) $\frac{1}{3} + \frac{2}{3} =$
14) $\frac{1}{4} + \frac{3}{4} =$	17) $\frac{5}{6} + \frac{4}{6} =$	20) $\frac{7}{12} + \frac{7}{12} =$	23) $\frac{8}{9} + \frac{6}{9} =$
15) $\frac{6}{10} + \frac{7}{10} =$	18) $\frac{1}{4} + \frac{2}{4} =$	21) $\frac{9}{10} + \frac{6}{10} =$	24) $\frac{4}{10} + \frac{5}{10} =$

**Equivalent fractions**

25) $\frac{2}{3} = \frac{18}{36}$	28) $\frac{3}{6} = \frac{\quad}{60}$	31) $\frac{1}{3} = \frac{5}{\quad}$	34) $\frac{2}{3} = \frac{8}{12}$
26) $\frac{2}{3} = \frac{8}{20}$	29) $\frac{1}{6} = \frac{\quad}{42}$	32) $\frac{\quad}{4} = \frac{6}{12}$	35) $\frac{1}{3} = \frac{3}{9}$
27) $\frac{\quad}{8} = \frac{50}{80}$	30) $\frac{2}{4} = \frac{\quad}{20}$	33) $\frac{4}{6} = \frac{12}{\quad}$	36) $\frac{1}{2} = \frac{10}{\quad}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Adding &amp; Subtracting Fractions: 6 [ C ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Subtracting Fractions with Common Denominators (horizontally):**

First check the denominators are the same.

Then subtract the numerators only. The denominators stay the same.

For example:

$$\frac{6}{8} - \frac{2}{8} = \frac{4}{8}$$

When subtracting, change the mixed number (single one) to an improper fraction where necessary before commencing.

For example:

$$1\frac{4}{8} - \frac{7}{8} = \frac{12}{8} - \frac{7}{8} = \frac{5}{8}$$

**Subtract the fractions**

- |  |  |
|--|--|
| 1) $\frac{7}{8} - \frac{5}{8} =$ _____   | 6) $\frac{9}{12} - \frac{5}{12} =$ _____ |
| 2) $\frac{3}{6} - \frac{1}{6} =$ _____   | 7) $\frac{2}{3} - \frac{1}{3} =$ _____   |
| 3) $\frac{7}{10} - \frac{5}{10} =$ _____ | 8) $\frac{9}{10} - \frac{4}{10} =$ _____ |
| 4) $\frac{9}{10} - \frac{8}{10} =$ _____ | 9) $\frac{6}{8} - \frac{5}{8} =$ _____   |
| 5) $\frac{8}{10} - \frac{3}{10} =$ _____ | 10) $\frac{5}{6} - \frac{4}{6} =$ _____  |

**Subtract the fractions (change to improper fractions where necessary)**

- |  |
|--|
| 11) $1\frac{2}{8} - \frac{3}{8} =$ _____   |
| 12) $1\frac{2}{6} - \frac{4}{6} =$ _____   |
| 13) $1\frac{2}{10} - \frac{5}{10} =$ _____ |
| 14) $1\frac{4}{10} - \frac{6}{10} =$ _____ |
| 15) $1\frac{1}{3} - \frac{2}{3} =$ _____   |

**Multiplying fractions by whole numbers**

- |                                 |                                  |
|---------------------------------|----------------------------------|
| 16) $\frac{3}{4}$ of 12 = _____ | 19) $\frac{5}{10}$ of 30 = _____ |
| 17) $\frac{3}{8}$ of 16 = _____ | 20) $\frac{2}{5}$ of 45 = _____  |
| 18) $\frac{2}{5}$ of 40 = _____ | 21) $\frac{4}{6}$ of 24 = _____  |

**Multiplying whole numbers by fractions**

- |                                      |                                     |
|--------------------------------------|-------------------------------------|
| 22) $30 \times \frac{9}{10} =$ _____ | 25) $25 \times \frac{2}{5} =$ _____ |
| 23) $27 \times \frac{7}{9} =$ _____  | 26) $40 \times \frac{3}{8} =$ _____ |
| 24) $36 \times \frac{4}{6} =$ _____  | 27) $27 \times \frac{6}{9} =$ _____ |

**Equivalent fractions**

- |                                      |                                       |                                       |                                      |
|--------------------------------------|---------------------------------------|---------------------------------------|--------------------------------------|
| 28) $\frac{5}{6} = \frac{45}{\quad}$ | 31) $\frac{1}{\quad} = \frac{3}{9}$   | 34) $\frac{4}{8} = \frac{\quad}{40}$  | 37) $\frac{1}{4} = \frac{\quad}{12}$ |
| 29) $\frac{5}{8} = \frac{\quad}{64}$ | 32) $\frac{\quad}{6} = \frac{21}{42}$ | 35) $\frac{2}{\quad} = \frac{10}{25}$ | 38) $\frac{\quad}{2} = \frac{9}{18}$ |
| 30) $\frac{\quad}{5} = \frac{4}{20}$ | 33) $\frac{1}{2} = \frac{\quad}{6}$   | 36) $\frac{1}{2} = \frac{\quad}{8}$   | 39) $\frac{\quad}{8} = \frac{4}{16}$ |

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Adding &amp; Subtracting Fractions: 6 [ D ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Subtracting Fractions with Common Denominators (vertically):**

The subtraction of fractions can be written vertically.

For example:

$$\begin{array}{r} \frac{7}{9} \\ - \frac{5}{9} \\ \hline \frac{2}{9} \end{array}$$

$$\begin{array}{r} 1\frac{3}{9} - \frac{12}{9} \\ \hline 1\frac{2}{9} \end{array}$$

**Subtract the fractions**

$$\begin{array}{r} 1) \quad \frac{7}{8} \\ - \frac{4}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 3) \quad \frac{2}{3} \\ - \frac{1}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 5) \quad \frac{4}{8} \\ - \frac{2}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 2) \quad \frac{2}{8} \\ - \frac{1}{8} \\ \hline \end{array}$$

$$\begin{array}{r} 4) \quad \frac{4}{5} \\ - \frac{1}{5} \\ \hline \end{array}$$

$$\begin{array}{r} 6) \quad \frac{2}{12} \\ - \frac{1}{12} \\ \hline \end{array}$$

**Subtract the fractions (change to improper fractions where necessary)**

$$\begin{array}{r} 7) \quad 1\frac{1}{3} \\ - \frac{2}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 9) \quad 1\frac{2}{4} \\ - \frac{3}{4} \\ \hline \end{array}$$

$$\begin{array}{r} 11) \quad 1\frac{2}{12} \\ - \frac{4}{12} \\ \hline \end{array}$$

$$\begin{array}{r} 8) \quad 1\frac{2}{4} \\ - \frac{3}{4} \\ \hline \end{array}$$

$$\begin{array}{r} 10) \quad 1\frac{4}{10} \\ - \frac{7}{10} \\ \hline \end{array}$$

$$\begin{array}{r} 12) \quad 1\frac{3}{5} \\ - \frac{4}{5} \\ \hline \end{array}$$

**Simplify these fractions**

$$13) \quad \frac{15}{25} = \underline{\hspace{2cm}} \quad 16) \quad \frac{14}{35} = \underline{\hspace{2cm}}$$

$$14) \quad \frac{30}{25} = \underline{\hspace{2cm}} \quad 17) \quad \frac{4}{10} = \underline{\hspace{2cm}}$$

$$15) \quad \frac{12}{18} = \underline{\hspace{2cm}} \quad 18) \quad \frac{60}{40} = \underline{\hspace{2cm}}$$

**Multiplying whole numbers by fractions**

$$19) \quad 30 \times \frac{6}{10} = \underline{\hspace{2cm}} \quad 22) \quad 8 \times \frac{3}{4} = \underline{\hspace{2cm}}$$

$$20) \quad 24 \times \frac{3}{6} = \underline{\hspace{2cm}} \quad 23) \quad 14 \times \frac{4}{7} = \underline{\hspace{2cm}}$$

$$21) \quad 12 \times \frac{4}{6} = \underline{\hspace{2cm}} \quad 24) \quad 21 \times \frac{2}{7} = \underline{\hspace{2cm}}$$

**Insert <, > or =**

$$25) \quad \frac{1}{6} \underline{\hspace{0.5cm}} \frac{5}{12}$$

$$29) \quad \frac{5}{9} \underline{\hspace{0.5cm}} \frac{9}{12}$$

$$33) \quad \frac{1}{4} \underline{\hspace{0.5cm}} \frac{2}{6}$$

$$37) \quad \frac{3}{4} \underline{\hspace{0.5cm}} \frac{2}{3}$$

$$26) \quad \frac{2}{12} \underline{\hspace{0.5cm}} \frac{5}{6}$$

$$30) \quad \frac{5}{6} \underline{\hspace{0.5cm}} \frac{3}{9}$$

$$34) \quad \frac{4}{6} \underline{\hspace{0.5cm}} \frac{2}{6}$$

$$38) \quad \frac{2}{3} \underline{\hspace{0.5cm}} \frac{3}{5}$$

$$27) \quad \frac{6}{12} \underline{\hspace{0.5cm}} \frac{2}{9}$$

$$31) \quad \frac{4}{9} \underline{\hspace{0.5cm}} \frac{2}{9}$$

$$35) \quad \frac{1}{3} \underline{\hspace{0.5cm}} \frac{4}{5}$$

$$39) \quad \frac{3}{6} \underline{\hspace{0.5cm}} \frac{1}{3}$$

$$28) \quad \frac{2}{9} \underline{\hspace{0.5cm}} \frac{4}{9}$$

$$32) \quad \frac{6}{9} \underline{\hspace{0.5cm}} \frac{4}{6}$$

$$36) \quad \frac{5}{6} \underline{\hspace{0.5cm}} \frac{2}{5}$$

$$40) \quad \frac{2}{4} \underline{\hspace{0.5cm}} \frac{4}{8}$$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Adding Mixed Numbers: 7 [A]



x	equivalent	compare	<b>+/- mixed</b>	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Adding Mixed Numbers:**

The addition of mixed numbers should be written vertically.

For example:

$$\begin{array}{r} 3\frac{1}{5} \\ + 2\frac{3}{5} \\ \hline 5\frac{4}{5} \end{array}$$

...and with regrouping:

$$\begin{array}{r} 2\frac{4}{5} \\ + 3\frac{3}{5} \\ \hline \cancel{5}\frac{7}{5} 6\frac{2}{5} \end{array}$$

**Add the fractions**

1) 
$$\begin{array}{r} 2\frac{3}{8} \\ + 5\frac{6}{8} \\ \hline \end{array}$$

3) 
$$\begin{array}{r} 4\frac{5}{6} \\ + 3\frac{2}{6} \\ \hline \end{array}$$

5) 
$$\begin{array}{r} 3\frac{2}{4} \\ + 4\frac{3}{4} \\ \hline \end{array}$$

7) 
$$\begin{array}{r} 3\frac{5}{10} \\ + 5\frac{6}{10} \\ \hline \end{array}$$

2) 
$$\begin{array}{r} 3\frac{5}{6} \\ + 4\frac{1}{6} \\ \hline \end{array}$$

4) 
$$\begin{array}{r} 4\frac{4}{5} \\ + 4\frac{3}{5} \\ \hline \end{array}$$

6) 
$$\begin{array}{r} 1\frac{2}{10} \\ + 1\frac{5}{10} \\ \hline \end{array}$$

8) 
$$\begin{array}{r} 2\frac{7}{9} \\ + 4\frac{3}{9} \\ \hline \end{array}$$

**Equivalent fractions**

9)  $\frac{6}{10} = \frac{30}{50}$

11)  $\frac{1}{2} = \frac{4}{8}$

13)  $\frac{1}{4} = \frac{2}{8} = \frac{2}{8}$

15)  $\frac{2}{5} = \frac{20}{50} = \frac{6}{30}$

10)  $\frac{5}{18} = \frac{30}{54}$

12)  $\frac{2}{5} = \frac{10}{25}$

14)  $\frac{1}{3} = \frac{2}{6} = \frac{4}{12}$

16)  $\frac{2}{3} = \frac{18}{27} = \frac{6}{9}$

**Multiplying fractions by whole numbers**

17)  $\frac{4}{6}$  of 30 = \_\_\_\_\_

21)  $\frac{3}{5}$  of 10 = \_\_\_\_\_

18)  $\frac{2}{5}$  of 25 = \_\_\_\_\_

22)  $\frac{2}{5}$  of 30 = \_\_\_\_\_

19)  $\frac{2}{7}$  of 28 = \_\_\_\_\_

23)  $\frac{2}{3}$  of 15 = \_\_\_\_\_

20)  $\frac{1}{4}$  of 48 = \_\_\_\_\_

24)  $\frac{4}{6}$  of 24 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

25)  $32 \times \frac{1}{4} =$  \_\_\_\_\_

29)  $12 \times \frac{4}{6} =$  \_\_\_\_\_

26)  $24 \times \frac{1}{4} =$  \_\_\_\_\_

30)  $30 \times \frac{1}{5} =$  \_\_\_\_\_

27)  $28 \times \frac{2}{7} =$  \_\_\_\_\_

31)  $24 \times \frac{3}{4} =$  \_\_\_\_\_

28)  $18 \times \frac{1}{2} =$  \_\_\_\_\_

32)  $21 \times \frac{5}{7} =$  \_\_\_\_\_

**Insert <, > or =**

33)  $\frac{1}{6}$  \_\_\_\_\_  $\frac{5}{9}$

35)  $\frac{2}{3}$  \_\_\_\_\_  $\frac{1}{3}$

37)  $\frac{1}{4}$  \_\_\_\_\_  $\frac{2}{4}$

39)  $\frac{3}{5}$  \_\_\_\_\_  $\frac{1}{6}$

34)  $\frac{3}{12}$  \_\_\_\_\_  $\frac{4}{9}$

36)  $\frac{1}{6}$  \_\_\_\_\_  $\frac{6}{9}$

38)  $\frac{1}{4}$  \_\_\_\_\_  $\frac{3}{6}$

40)  $\frac{3}{9}$  \_\_\_\_\_  $\frac{4}{6}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Adding Mixed Numbers: 7 [ B ]



x	equivalent	compare	<b>+/- mixed</b>	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Add the fractions**

1)  $2\frac{2}{3}$   
+  $3\frac{2}{3}$   
\_\_\_\_\_

4)  $2\frac{1}{6}$   
+  $3\frac{4}{6}$   
\_\_\_\_\_

7)  $5\frac{1}{4}$   
+  $3\frac{2}{4}$   
\_\_\_\_\_

10)  $3\frac{5}{6}$   
+  $1\frac{1}{6}$   
\_\_\_\_\_

2)  $2\frac{6}{10}$   
+  $4\frac{5}{10}$   
\_\_\_\_\_

5)  $2\frac{5}{12}$   
+  $2\frac{9}{12}$   
\_\_\_\_\_

8)  $3\frac{4}{10}$   
+  $3\frac{6}{10}$   
\_\_\_\_\_

11)  $2\frac{3}{5}$   
+  $3\frac{4}{5}$   
\_\_\_\_\_

3)  $1\frac{2}{9}$   
+  $1\frac{5}{9}$   
\_\_\_\_\_

6)  $1\frac{7}{8}$   
+  $7\frac{4}{8}$   
\_\_\_\_\_

9)  $4\frac{3}{4}$   
+  $3\frac{3}{4}$   
\_\_\_\_\_

12)  $7\frac{2}{10}$   
+  $1\frac{8}{10}$   
\_\_\_\_\_

**Equivalent fractions**

13)  $\frac{2}{3} = \frac{4}{6}$

15)  $\frac{1}{2} = \frac{6}{12}$

17)  $\frac{5}{10} = \frac{24}{48}$

19)  $\frac{1}{2} = \frac{14}{28}$

14)  $\frac{1}{2} = \frac{7}{14}$

16)  $\frac{2}{3} = \frac{3}{6}$

18)  $\frac{5}{10} = \frac{16}{32}$

20)  $\frac{6}{8} = \frac{48}{64}$

**Multiplying fractions by whole numbers**

21)  $\frac{2}{5}$  of 30 = \_\_\_\_\_

24)  $\frac{3}{4}$  of 8 = \_\_\_\_\_

22)  $\frac{4}{5}$  of 40 = \_\_\_\_\_

25)  $\frac{2}{9}$  of 45 = \_\_\_\_\_

23)  $\frac{2}{3}$  of 27 = \_\_\_\_\_

26)  $\frac{5}{10}$  of 40 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

27)  $40 \times \frac{2}{4} =$  \_\_\_\_\_

30)  $48 \times \frac{5}{6} =$  \_\_\_\_\_

28)  $20 \times \frac{8}{10} =$  \_\_\_\_\_

31)  $30 \times \frac{3}{6} =$  \_\_\_\_\_

29)  $24 \times \frac{3}{8} =$  \_\_\_\_\_

32)  $12 \times \frac{1}{2} =$  \_\_\_\_\_

**Insert <, > or =**

33)  $\frac{3}{9}$  \_\_\_\_\_  $\frac{1}{12}$

36)  $\frac{2}{9}$  \_\_\_\_\_  $\frac{3}{9}$

39)  $\frac{3}{6}$  \_\_\_\_\_  $\frac{2}{3}$

42)  $\frac{1}{4}$  \_\_\_\_\_  $\frac{4}{5}$

34)  $\frac{2}{3}$  \_\_\_\_\_  $\frac{6}{12}$

37)  $\frac{1}{3}$  \_\_\_\_\_  $\frac{5}{6}$

40)  $\frac{2}{4}$  \_\_\_\_\_  $\frac{1}{4}$

43)  $\frac{3}{5}$  \_\_\_\_\_  $\frac{6}{10}$

35)  $\frac{1}{9}$  \_\_\_\_\_  $\frac{1}{3}$

38)  $\frac{4}{6}$  \_\_\_\_\_  $\frac{6}{9}$

41)  $\frac{2}{3}$  \_\_\_\_\_  $\frac{2}{4}$

44)  $\frac{1}{3}$  \_\_\_\_\_  $\frac{1}{3}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Subtracting Mixed Numbers: 7 [ C ]



x	equivalent	compare	<b>+/- mixed</b>	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Subtracting Mixed Numbers:**

The subtraction of mixed numbers should be written vertically.

For example:

$$\begin{array}{r} 4\frac{3}{4} \\ - 2\frac{3}{5} \\ \hline 5\frac{4}{5} \end{array}$$

...and with regrouping:

$$\begin{array}{r} 5\cancel{\frac{2}{6}}4\frac{8}{5} \\ + 3\frac{3}{6} \\ \hline 1\frac{5}{6} \end{array}$$

**Subtract the fractions**

1) 
$$\begin{array}{r} 5\frac{3}{4} \\ - 3\frac{2}{4} \\ \hline \end{array}$$

3) 
$$\begin{array}{r} 7\frac{2}{4} \\ - 4\frac{3}{4} \\ \hline \end{array}$$

5) 
$$\begin{array}{r} 4\frac{2}{4} \\ - 3\frac{3}{4} \\ \hline \end{array}$$

7) 
$$\begin{array}{r} 7\frac{2}{4} \\ - 4\frac{3}{4} \\ \hline \end{array}$$

2) 
$$\begin{array}{r} 5\frac{1}{12} \\ - 3\frac{10}{12} \\ \hline \end{array}$$

4) 
$$\begin{array}{r} 9\frac{4}{10} \\ - 6\frac{7}{10} \\ \hline \end{array}$$

6) 
$$\begin{array}{r} 5\frac{3}{12} \\ - 3\frac{10}{12} \\ \hline \end{array}$$

8) 
$$\begin{array}{r} 9\frac{4}{10} \\ - 6\frac{7}{10} \\ \hline \end{array}$$

**Equivalent fractions**

9)  $\frac{3}{5} = \frac{21}{\quad}$

11)  $\frac{1}{6} = \frac{\quad}{54}$

13)  $\frac{2}{6} = \frac{20}{\quad} = \frac{4}{\quad}$

15)  $\frac{1}{5} = \frac{\quad}{20} = \frac{9}{\quad}$

10)  $\frac{1}{\quad} = \frac{2}{10}$

12)  $\frac{2}{\quad} = \frac{14}{21}$

14)  $\frac{1}{6} = \frac{2}{\quad} = \frac{3}{\quad}$

16)  $\frac{1}{2} = \frac{\quad}{10} = \frac{10}{\quad}$

**Multiplying fractions by whole numbers**

17)  $\frac{1}{7}$  of 21 = \_\_\_\_\_

21)  $\frac{1}{8}$  of 24 = \_\_\_\_\_

18)  $\frac{2}{4}$  of 24 = \_\_\_\_\_

22)  $\frac{1}{8}$  of 16 = \_\_\_\_\_

19)  $\frac{2}{5}$  of 30 = \_\_\_\_\_

23)  $\frac{7}{10}$  of 10 = \_\_\_\_\_

20)  $\frac{1}{2}$  of 18 = \_\_\_\_\_

24)  $\frac{1}{5}$  of 45 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

25)  $30 \times \frac{2}{6} = \underline{\hspace{2cm}}$

29)  $48 \times \frac{3}{8} = \underline{\hspace{2cm}}$

26)  $20 \times \frac{5}{10} = \underline{\hspace{2cm}}$

30)  $10 \times \frac{6}{10} = \underline{\hspace{2cm}}$

27)  $16 \times \frac{5}{8} = \underline{\hspace{2cm}}$

31)  $20 \times \frac{1}{4} = \underline{\hspace{2cm}}$

28)  $42 \times \frac{3}{6} = \underline{\hspace{2cm}}$

32)  $10 \times \frac{4}{5} = \underline{\hspace{2cm}}$

**Insert <, > or =**

33)  $\frac{2}{6} \underline{\hspace{0.5cm}} \frac{7}{12}$

35)  $\frac{15}{6} \underline{\hspace{0.5cm}} 2\frac{2}{6}$

37)  $\frac{2}{5} \underline{\hspace{0.5cm}} \frac{2}{3}$

39)  $\frac{1}{4} \underline{\hspace{0.5cm}} \frac{2}{3}$

34)  $\frac{1}{3} \underline{\hspace{0.5cm}} \frac{3}{6}$

36)  $\frac{7}{12} \underline{\hspace{0.5cm}} \frac{1}{6}$

38)  $3\frac{2}{5} \underline{\hspace{0.5cm}} \frac{16}{5}$

40)  $\frac{3}{5} \underline{\hspace{0.5cm}} \frac{1}{6}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Subtracting Mixed Numbers: 7 [ D ]



x	equivalent	compare	<b>+/- mixed</b>	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Subtract the fractions**

1) 
$$\begin{array}{r} 2\frac{3}{8} \\ - 1\frac{6}{8} \\ \hline \end{array}$$

4) 
$$\begin{array}{r} 4\frac{4}{12} \\ - 2\frac{11}{12} \\ \hline \end{array}$$

7) 
$$\begin{array}{r} 5\frac{1}{3} \\ - 2\frac{2}{3} \\ \hline \end{array}$$

10) 
$$\begin{array}{r} 6\frac{1}{10} \\ - 4\frac{8}{10} \\ \hline \end{array}$$

2) 
$$\begin{array}{r} 8\frac{2}{6} \\ - 7\frac{1}{6} \\ \hline \end{array}$$

5) 
$$\begin{array}{r} 9\frac{2}{4} \\ - 5\frac{3}{4} \\ \hline \end{array}$$

8) 
$$\begin{array}{r} 7\frac{2}{5} \\ - 1\frac{3}{5} \\ \hline \end{array}$$

11) 
$$\begin{array}{r} 9\frac{1}{3} \\ - 1\frac{2}{3} \\ \hline \end{array}$$

3) 
$$\begin{array}{r} 9\frac{2}{4} \\ - 7\frac{3}{4} \\ \hline \end{array}$$

6) 
$$\begin{array}{r} 5\frac{5}{6} \\ - 1\frac{4}{6} \\ \hline \end{array}$$

9) 
$$\begin{array}{r} 2\frac{2}{4} \\ - 1\frac{3}{4} \\ \hline \end{array}$$

12) 
$$\begin{array}{r} 7\frac{1}{5} \\ - 4\frac{4}{5} \\ \hline \end{array}$$

**Equivalent fractions**

13)  $\frac{1}{2} = \frac{8}{16}$

15)  $\frac{4}{5} = \frac{8}{10}$

17)  $\frac{4}{8} = \frac{27}{36}$

19)  $\frac{3}{6} = \frac{4}{8}$

14)  $\frac{1}{2} = \frac{5}{10}$

16)  $\frac{3}{5} = \frac{18}{30}$

18)  $\frac{1}{3} = \frac{5}{15}$

20)  $\frac{3}{6} = \frac{6}{12}$

**Multiplying fractions by whole numbers**

21)  $\frac{6}{9}$  of 27 = \_\_\_\_\_

25)  $\frac{2}{7}$  of 14 = \_\_\_\_\_

22)  $\frac{5}{9}$  of 45 = \_\_\_\_\_

26)  $\frac{4}{9}$  of 36 = \_\_\_\_\_

23)  $\frac{7}{9}$  of 9 = \_\_\_\_\_

27)  $\frac{2}{5}$  of 5 = \_\_\_\_\_

24)  $\frac{1}{4}$  of 36 = \_\_\_\_\_

28)  $\frac{3}{7}$  of 42 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

29)  $42 \times \frac{6}{7} =$  \_\_\_\_\_

33)  $30 \times \frac{2}{10} =$  \_\_\_\_\_

30)  $45 \times \frac{3}{5} =$  \_\_\_\_\_

34)  $28 \times \frac{1}{4} =$  \_\_\_\_\_

31)  $30 \times \frac{1}{5} =$  \_\_\_\_\_

35)  $8 \times \frac{6}{8} =$  \_\_\_\_\_

32)  $15 \times \frac{3}{5} =$  \_\_\_\_\_

36)  $7 \times \frac{1}{7} =$  \_\_\_\_\_

**Insert <, > or =**

37)  $2\frac{2}{4}$  \_\_\_\_\_  $\frac{10}{4}$

40)  $\frac{13}{6}$  \_\_\_\_\_  $2\frac{1}{6}$

43)  $4\frac{1}{6}$  \_\_\_\_\_  $\frac{24}{6}$

46)  $\frac{15}{4}$  \_\_\_\_\_  $3\frac{3}{4}$

38)  $1\frac{2}{9}$  \_\_\_\_\_  $\frac{11}{9}$

41)  $\frac{1}{3}$  \_\_\_\_\_  $\frac{2}{12}$

44)  $\frac{3}{6}$  \_\_\_\_\_  $\frac{2}{4}$

47)  $\frac{4}{6}$  \_\_\_\_\_  $\frac{3}{4}$

39)  $3\frac{2}{9}$  \_\_\_\_\_  $\frac{28}{9}$

42)  $3\frac{1}{3}$  \_\_\_\_\_  $\frac{11}{3}$

45)  $\frac{1}{4}$  \_\_\_\_\_  $\frac{1}{3}$

48)  $\frac{2}{3}$  \_\_\_\_\_  $\frac{1}{5}$

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Name: \_\_\_\_\_ Score: \_\_\_\_\_ Converting Decimals to Common Fractions: 8 [ A ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	<b>decimals</b>	revision

**Converting Decimal Fractions to Common Fractions or Mixed Numbers:**

It is important to look at the places shown by each decimal. If only the tenths place is shown then use 10 as the denominator; if hundredths, then use 100 as the denominator.

0.4 is 4 tenths  $0.4 = \frac{4}{10}$

0.36 is 36 hundredths  $0.36 = \frac{36}{100}$

2.5 is 2 and 5 tenths  $2.5 = 2\frac{5}{10}$

6.78 is 6 and 78 hundredths  $6.78 = 6\frac{78}{100}$

**Convert decimals to common fractions**

- |                 |                 |
|-----------------|-----------------|
| 1) 0.54 = _____ | 6) 0.71 = _____ |
| 2) 0.8 = _____  | 7) 0.1 = _____  |
| 3) 0.03 = _____ | 8) 0.92 = _____ |
| 4) 0.4 = _____  | 9) 0.7 = _____  |
| 5) 0.09 = _____ | 10) 0.2 = _____ |

**Convert decimals to mixed numbers**

- |                  |                  |
|------------------|------------------|
| 11) 1.54 = _____ | 16) 4.71 = _____ |
| 12) 3.8 = _____  | 17) 0.1 = _____  |
| 13) 5.03 = _____ | 18) 9.92 = _____ |
| 14) 4.4 = _____  | 19) 5.7 = _____  |
| 15) 3.09 = _____ | 20) 7.2 = _____  |

**Equivalent fractions**

- |                                  |                                   |                                   |                                  |
|----------------------------------|-----------------------------------|-----------------------------------|----------------------------------|
| 21) $\frac{1}{-} = \frac{2}{10}$ | 23) $\frac{-}{5} = \frac{9}{15}$  | 25) $\frac{-}{5} = \frac{24}{30}$ | 27) $\frac{1}{2} = \frac{-}{14}$ |
| 22) $\frac{1}{2} = \frac{-}{12}$ | 24) $\frac{2}{-} = \frac{14}{21}$ | 26) $\frac{-}{5} = \frac{16}{40}$ | 28) $\frac{6}{8} = \frac{-}{48}$ |

**Multiply fractions by whole numbers**

- |                                 |                                  |
|---------------------------------|----------------------------------|
| 29) $\frac{3}{4}$ of 12 = _____ | 33) $\frac{1}{10}$ of 30 = _____ |
| 30) $\frac{3}{7}$ of 35 = _____ | 34) $\frac{4}{7}$ of 7 = _____   |
| 31) $\frac{6}{8}$ of 16 = _____ | 35) $\frac{4}{9}$ of 27 = _____  |
| 32) $\frac{2}{9}$ of 45 = _____ | 36) $\frac{1}{3}$ of 27 = _____  |

**Multiply whole numbers by fractions**

- |                                     |                                      |
|-------------------------------------|--------------------------------------|
| 37) $34 \times \frac{2}{6} =$ _____ | 41) $24 \times \frac{5}{8} =$ _____  |
| 38) $36 \times \frac{1}{4} =$ _____ | 42) $8 \times \frac{3}{4} =$ _____   |
| 39) $27 \times \frac{6}{9} =$ _____ | 43) $40 \times \frac{3}{10} =$ _____ |
| 40) $40 \times \frac{6}{8} =$ _____ | 44) $10 \times \frac{3}{5} =$ _____  |

**Insert <, > or =**

- |  |   |  |  |
|--|---|--|--|
| 45) $\frac{2}{12}$ _____ $\frac{1}{3}$ | 47) $\frac{4}{3}$ _____ $1\frac{1}{3}$  | 49) $2\frac{1}{3}$ _____ $\frac{7}{3}$ | 51) $\frac{1}{3}$ _____ $\frac{2}{6}$  |
| 46) $\frac{3}{6}$ _____ $\frac{2}{9}$  | 48) $1\frac{2}{9}$ _____ $\frac{12}{9}$ | 50) $\frac{3}{6}$ _____ $\frac{1}{5}$  | 52) $\frac{13}{5}$ _____ $\frac{1}{4}$ |

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Name: \_\_\_\_\_ Score: \_\_\_\_\_ Converting Decimals to Common Fractions: 8 [ B ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	<b>decimals</b>	revision

**Convert decimals to common fractions**

- 1)  $0.08 =$  \_\_\_\_\_ 6)  $0.1 =$  \_\_\_\_\_  
 2)  $0.23 =$  \_\_\_\_\_ 7)  $0.21 =$  \_\_\_\_\_  
 3)  $0.6 =$  \_\_\_\_\_ 8)  $0.4 =$  \_\_\_\_\_  
 4)  $0.72 =$  \_\_\_\_\_ 9)  $0.24 =$  \_\_\_\_\_  
 5)  $0.9 =$  \_\_\_\_\_ 10)  $0.73 =$  \_\_\_\_\_

**Convert decimals to mixed numbers**

- 11)  $5.08 =$  \_\_\_\_\_ 16)  $2.1 =$  \_\_\_\_\_  
 12)  $8.23 =$  \_\_\_\_\_ 17)  $9.21 =$  \_\_\_\_\_  
 13)  $7.59 =$  \_\_\_\_\_ 18)  $7.41 =$  \_\_\_\_\_  
 14)  $4.57 =$  \_\_\_\_\_ 19)  $7.7 =$  \_\_\_\_\_  
 15)  $1.24 =$  \_\_\_\_\_ 20)  $4.9 =$  \_\_\_\_\_

**Multiply fractions by whole numbers**

- 21)  $\frac{2}{10}$  of 10 = \_\_\_\_\_ 25)  $\frac{2}{4}$  of 24 = \_\_\_\_\_  
 22)  $\frac{1}{4}$  of 32 = \_\_\_\_\_ 26)  $\frac{2}{5}$  of 15 = \_\_\_\_\_  
 23)  $\frac{6}{10}$  of 10 = \_\_\_\_\_ 27)  $\frac{4}{5}$  of 40 = \_\_\_\_\_  
 24)  $\frac{1}{10}$  of 50 = \_\_\_\_\_ 28)  $\frac{2}{3}$  of 42 = \_\_\_\_\_

**Simplify these fractions**

- 29)  $\frac{8}{24} =$  \_\_\_\_\_ 33)  $\frac{32}{36} =$  \_\_\_\_\_  
 30)  $\frac{6}{15} =$  \_\_\_\_\_ 34)  $\frac{15}{12} =$  \_\_\_\_\_  
 31)  $\frac{42}{36} =$  \_\_\_\_\_ 35)  $\frac{20}{16} =$  \_\_\_\_\_  
 32)  $\frac{18}{20} =$  \_\_\_\_\_ 36)  $\frac{3}{27} =$  \_\_\_\_\_

**Insert <, > or =**

- 37)  $\frac{4}{9}$  \_\_\_\_\_  $\frac{5}{9}$  40)  $\frac{3}{6}$  \_\_\_\_\_  $\frac{8}{9}$  43)  $1\frac{5}{6}$  \_\_\_\_\_  $1\frac{10}{12}$  46)  $\frac{5}{4}$  \_\_\_\_\_  $\frac{10}{8}$   
 38)  $\frac{1}{6}$  \_\_\_\_\_  $\frac{1}{12}$  41)  $\frac{7}{12}$  \_\_\_\_\_  $\frac{8}{9}$  44)  $\frac{10}{6}$  \_\_\_\_\_  $\frac{16}{6}$  47)  $\frac{9}{4}$  \_\_\_\_\_  $\frac{7}{3}$   
 39)  $\frac{5}{6}$  \_\_\_\_\_  $\frac{2}{3}$  42)  $\frac{2}{3}$  \_\_\_\_\_  $\frac{3}{12}$  45)  $\frac{4}{6}$  \_\_\_\_\_  $\frac{2}{4}$  48)  $\frac{10}{4}$  \_\_\_\_\_  $\frac{17}{6}$

**Improper Fractions to Mixed Numbers**

- 49)  $\frac{17}{5} =$  \_\_\_\_\_ 53)  $\frac{10}{5} =$  \_\_\_\_\_  
 50)  $\frac{9}{2} =$  \_\_\_\_\_ 54)  $\frac{17}{2} =$  \_\_\_\_\_  
 51)  $\frac{13}{5} =$  \_\_\_\_\_ 55)  $\frac{49}{5} =$  \_\_\_\_\_  
 52)  $\frac{34}{10} =$  \_\_\_\_\_ 56)  $\frac{19}{3} =$  \_\_\_\_\_

**Mixed Numbers to Improper Fractions**

- 57)  $4\frac{2}{6} =$  \_\_\_\_\_ 61)  $6\frac{1}{2} =$  \_\_\_\_\_  
 58)  $7 = \frac{\quad}{4}$  62)  $2\frac{4}{5} =$  \_\_\_\_\_  
 59)  $1\frac{1}{12} =$  \_\_\_\_\_ 63)  $5\frac{2}{3} =$  \_\_\_\_\_  
 60)  $2\frac{1}{5} =$  \_\_\_\_\_ 64)  $4 = \frac{\quad}{4}$

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Name: \_\_\_\_\_ Score: \_\_\_\_\_ Converting Common Fractions to Decimals: 8 [ C ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Converting Common Fractions or Mixed Numbers to Decimal Fractions:**

It is important to look at the denominator. If it is a 10 or 100, think of the places that are shown by that denominator.

$\frac{4}{10}$  is 4 tenths so as a decimal it is 0.4

$\frac{36}{100}$  is 36 hundredths so as a decimal it is 0.36

$3\frac{7}{10}$  is 3 and 7 tenths so as a decimal it is 3.7

$8\frac{54}{100}$  is 8 and 54 hundredths so as a decimal it is 8.54

**Convert common fractions to decimals**

1)  $\frac{6}{10} =$  \_\_\_\_\_ 6)  $\frac{12}{100} =$  \_\_\_\_\_

2)  $\frac{2}{10} =$  \_\_\_\_\_ 7)  $\frac{5}{100} =$  \_\_\_\_\_

3)  $\frac{83}{100} =$  \_\_\_\_\_ 8)  $\frac{78}{100} =$  \_\_\_\_\_

4)  $\frac{6}{100} =$  \_\_\_\_\_ 9)  $\frac{86}{100} =$  \_\_\_\_\_

5)  $\frac{20}{100} =$  \_\_\_\_\_ 10)  $\frac{7}{10} =$  \_\_\_\_\_

**Convert mixed numbers to decimals**

11)  $4\frac{3}{100} =$  \_\_\_\_\_ 16)  $2\frac{6}{10} =$  \_\_\_\_\_

12)  $6\frac{41}{100} =$  \_\_\_\_\_ 17)  $4\frac{2}{10} =$  \_\_\_\_\_

13)  $1\frac{65}{100} =$  \_\_\_\_\_ 18)  $9\frac{15}{100} =$  \_\_\_\_\_

14)  $8\frac{83}{100} =$  \_\_\_\_\_ 19)  $3\frac{8}{10} =$  \_\_\_\_\_

15)  $7\frac{9}{10} =$  \_\_\_\_\_ 20)  $5\frac{7}{10} =$  \_\_\_\_\_

**Equivalent fractions**

21)  $\frac{3}{9} = \frac{1}{3}$

23)  $\frac{1}{3} = \frac{2}{6}$

25)  $\frac{2}{4} = \frac{1}{2}$

27)  $\frac{1}{6} = \frac{2}{12}$

22)  $\frac{3}{9} = \frac{1}{3}$

24)  $\frac{3}{9} = \frac{1}{3}$

26)  $\frac{1}{2} = \frac{2}{4}$

28)  $\frac{4}{5} = \frac{8}{10}$

**Multiply fractions by whole numbers**

29)  $\frac{7}{10}$  of 30 = \_\_\_\_\_ 33)  $\frac{1}{5}$  of 35 = \_\_\_\_\_

30)  $\frac{7}{10}$  of 20 = \_\_\_\_\_ 34)  $\frac{2}{8}$  of 16 = \_\_\_\_\_

31)  $\frac{1}{2}$  of 12 = \_\_\_\_\_ 35)  $\frac{3}{7}$  of 42 = \_\_\_\_\_

32)  $\frac{3}{7}$  of 35 = \_\_\_\_\_ 36)  $\frac{3}{6}$  of 12 = \_\_\_\_\_

**Simplify these fractions**

37)  $\frac{24}{16} =$  \_\_\_\_\_ 41)  $\frac{6}{4} =$  \_\_\_\_\_

38)  $\frac{2}{18} =$  \_\_\_\_\_ 42)  $\frac{6}{9} =$  \_\_\_\_\_

39)  $\frac{12}{16} =$  \_\_\_\_\_ 43)  $\frac{30}{40} =$  \_\_\_\_\_

40)  $\frac{2}{8} =$  \_\_\_\_\_ 44)  $\frac{12}{9} =$  \_\_\_\_\_

**Insert <, > or =**

45)  $\frac{5}{12}$  \_\_\_\_\_  $\frac{1}{3}$

47)  $\frac{2}{3}$  \_\_\_\_\_  $\frac{4}{6}$

49)  $\frac{8}{5}$  \_\_\_\_\_  $\frac{5}{6}$

51)  $\frac{1}{4}$  \_\_\_\_\_  $\frac{14}{5}$

46)  $\frac{11}{12}$  \_\_\_\_\_  $\frac{1}{6}$

48)  $\frac{7}{9}$  \_\_\_\_\_  $\frac{1}{6}$

50)  $\frac{1}{3}$  \_\_\_\_\_  $\frac{3}{4}$

52)  $\frac{7}{5}$  \_\_\_\_\_  $\frac{10}{4}$

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Name: \_\_\_\_\_ Score: \_\_\_\_\_ Converting Common Fractions to Decimals: 8 [ D ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	<b>decimals</b>	revision

**Convert common fractions to decimals**

- 1)  $\frac{12}{100} =$  \_\_\_\_\_ 6)  $\frac{9}{100} =$  \_\_\_\_\_
- 2)  $\frac{1}{100} =$  \_\_\_\_\_ 7)  $\frac{13}{100} =$  \_\_\_\_\_
- 3)  $\frac{30}{100} =$  \_\_\_\_\_ 8)  $\frac{97}{100} =$  \_\_\_\_\_
- 4)  $\frac{21}{100} =$  \_\_\_\_\_ 9)  $\frac{7}{10} =$  \_\_\_\_\_
- 5)  $\frac{2}{10} =$  \_\_\_\_\_ 10)  $\frac{5}{10} =$  \_\_\_\_\_

**Convert mixed numbers to decimals**

- 11)  $3\frac{37}{100} =$  \_\_\_\_\_ 16)  $3\frac{7}{10} =$  \_\_\_\_\_
- 12)  $5\frac{8}{10} =$  \_\_\_\_\_ 17)  $8\frac{5}{100} =$  \_\_\_\_\_
- 13)  $9\frac{2}{10} =$  \_\_\_\_\_ 18)  $5\frac{9}{10} =$  \_\_\_\_\_
- 14)  $8\frac{5}{10} =$  \_\_\_\_\_ 19)  $1\frac{3}{10} =$  \_\_\_\_\_
- 15)  $5\frac{1}{10} =$  \_\_\_\_\_ 20)  $2\frac{30}{100} =$  \_\_\_\_\_

**Multiply fractions by whole numbers**

- 21)  $\frac{3}{7}$  of 35 = \_\_\_\_\_ 25)  $\frac{8}{9}$  of 27 = \_\_\_\_\_
- 22)  $\frac{1}{5}$  of 45 = \_\_\_\_\_ 26)  $\frac{4}{6}$  of 30 = \_\_\_\_\_
- 23)  $\frac{2}{5}$  of 5 = \_\_\_\_\_ 27)  $\frac{2}{5}$  of 25 = \_\_\_\_\_
- 24)  $\frac{2}{4}$  of 36 = \_\_\_\_\_ 28)  $\frac{1}{4}$  of 20 = \_\_\_\_\_

**Simplify these fractions**

- 29)  $\frac{10}{25} =$  \_\_\_\_\_ 33)  $\frac{20}{24} =$  \_\_\_\_\_
- 30)  $\frac{12}{32} =$  \_\_\_\_\_ 34)  $\frac{48}{32} =$  \_\_\_\_\_
- 31)  $\frac{3}{24} =$  \_\_\_\_\_ 35)  $\frac{8}{32} =$  \_\_\_\_\_
- 32)  $\frac{18}{24} =$  \_\_\_\_\_ 36)  $\frac{14}{10} =$  \_\_\_\_\_

**Insert <, > or =**

- 37)  $\frac{1}{3}$  \_\_\_\_\_  $\frac{4}{6}$  40)  $\frac{1}{9}$  \_\_\_\_\_  $\frac{7}{12}$  43)  $\frac{12}{5}$  \_\_\_\_\_  $2\frac{2}{5}$  46)  $\frac{6}{2}$  \_\_\_\_\_  $\frac{8}{3}$
- 38)  $\frac{1}{6}$  \_\_\_\_\_  $\frac{5}{6}$  41)  $\frac{9}{12}$  \_\_\_\_\_  $\frac{2}{3}$  44)  $\frac{9}{6}$  \_\_\_\_\_  $1\frac{2}{6}$  47)  $\frac{4}{3}$  \_\_\_\_\_  $\frac{2}{4}$
- 39)  $\frac{4}{12}$  \_\_\_\_\_  $\frac{1}{3}$  42)  $\frac{12}{9}$  \_\_\_\_\_  $1\frac{4}{9}$  45)  $\frac{3}{5}$  \_\_\_\_\_  $\frac{1}{4}$  48)  $\frac{7}{5}$  \_\_\_\_\_  $\frac{11}{6}$

**Improper Fractions to Mixed Numbers**

- 49)  $\frac{7}{2} =$  \_\_\_\_\_ 53)  $\frac{16}{4} =$  \_\_\_\_\_
- 50)  $\frac{7}{5} =$  \_\_\_\_\_ 54)  $\frac{17}{8} =$  \_\_\_\_\_
- 51)  $\frac{13}{4} =$  \_\_\_\_\_ 55)  $\frac{76}{8} =$  \_\_\_\_\_
- 52)  $\frac{60}{10} =$  \_\_\_\_\_ 56)  $\frac{37}{5} =$  \_\_\_\_\_

**Mixed Numbers to Improper Fractions**

- 57)  $7\frac{2}{6} =$  \_\_\_\_\_ 61)  $8\frac{1}{4} =$  \_\_\_\_\_
- 58)  $9 =$   $\frac{\quad}{5}$  62)  $2\frac{4}{6} =$  \_\_\_\_\_
- 59)  $2\frac{2}{8} =$  \_\_\_\_\_ 63)  $5\frac{1}{5} =$  \_\_\_\_\_
- 60)  $8\frac{3}{5} =$  \_\_\_\_\_ 64)  $4 =$   $\frac{\quad}{5}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Advanced Fractions to Decimals: 9 [ A ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Converting Equivalent Common Fractions to Decimal Fractions:**

When the denominator is not a 10 or 100, then the fraction needs to be changed to its equivalent denominator that is 10 or 100.

$$\cancel{\frac{2}{5}} \frac{4}{10} \text{ is 4 tenths so as a decimal it is } 0.4$$

$$\cancel{\frac{5}{20}} \frac{25}{100} \text{ is 25 hundredths so as a decimal it is } 0.25$$

$$3\cancel{\frac{1}{2}} \frac{5}{10} \text{ is 3 and 5 tenths so as a decimal it is } 3.5$$

$$8\cancel{\frac{6}{25}} \frac{24}{100} \text{ is 8 and 24 hundredths so as a decimal it is } 8.24$$

**Convert common fractions to decimals**

- |                           |                            |
|---------------------------|----------------------------|
| 1) $\frac{3}{25} =$ _____ | 6) $\frac{1}{50} =$ _____  |
| 2) $\frac{2}{5} =$ _____  | 7) $\frac{4}{5} =$ _____   |
| 3) $\frac{3}{5} =$ _____  | 8) $\frac{41}{50} =$ _____ |
| 4) $\frac{1}{2} =$ _____  | 9) $\frac{2}{25} =$ _____  |
| 5) $\frac{1}{5} =$ _____  | 10) $\frac{7}{20} =$ _____ |

**Convert mixed numbers to decimals**

- |                              |                              |
|------------------------------|------------------------------|
| 11) $4\frac{9}{25} =$ _____  | 16) $3\frac{4}{5} =$ _____   |
| 12) $3\frac{12}{20} =$ _____ | 17) $5\frac{1}{2} =$ _____   |
| 13) $1\frac{3}{20} =$ _____  | 18) $1\frac{8}{25} =$ _____  |
| 14) $1\frac{22}{25} =$ _____ | 19) $5\frac{20}{25} =$ _____ |
| 15) $4\frac{5}{20} =$ _____  | 20) $6\frac{8}{20} =$ _____  |

**Equivalent fractions**

- |   |  |  |   |
|---|--|--|---|
| 21) $\frac{1}{2} = \frac{9}{18} = \frac{16}{32}$  | 23) $\frac{1}{2} = \frac{7}{14} = \frac{9}{18}$  | 25) $\frac{1}{5} = \frac{8}{40} = \frac{3}{15}$  | 27) $\frac{6}{8} = \frac{24}{32} = \frac{30}{40}$ |
| 22) $\frac{2}{5} = \frac{18}{45} = \frac{30}{75}$ | 24) $\frac{2}{4} = \frac{16}{40} = \frac{6}{30}$ | 26) $\frac{2}{4} = \frac{16}{40} = \frac{6}{30}$ | 28) $\frac{1}{8} = \frac{16}{128} = \frac{6}{48}$ |

**Multiplying fractions by whole numbers**

- |                                 |                                 |
|---------------------------------|---------------------------------|
| 29) $\frac{2}{4}$ of 8 = _____  | 33) $\frac{1}{2}$ of 30 = _____ |
| 30) $\frac{4}{6}$ of 30 = _____ | 34) $\frac{5}{9}$ of 45 = _____ |
| 31) $\frac{1}{2}$ of 36 = _____ | 35) $\frac{1}{2}$ of 38 = _____ |
| 32) $\frac{1}{3}$ of 12 = _____ | 36) $\frac{2}{7}$ of 35 = _____ |

**Multiplying whole numbers by fractions**

- |                                     |                                     |
|-------------------------------------|-------------------------------------|
| 37) $9 \times \frac{3}{9} =$ _____  | 41) $36 \times \frac{2}{4} =$ _____ |
| 38) $35 \times \frac{4}{7} =$ _____ | 42) $18 \times \frac{1}{2} =$ _____ |
| 39) $24 \times \frac{7}{8} =$ _____ | 43) $5 \times \frac{2}{5} =$ _____  |
| 40) $32 \times \frac{4}{8} =$ _____ | 44) $14 \times \frac{3}{7} =$ _____ |

**Insert <, > or =**

- |  |  |  |   |
|--|--|--|---|
| 45) $\frac{1}{3} \underline{\hspace{1cm}} \frac{3}{6}$   | 47) $1\frac{5}{12} \underline{\hspace{1cm}} \frac{16}{12}$ | 49) $2\frac{5}{6} \underline{\hspace{1cm}} \frac{17}{6}$ | 51) $\frac{11}{4} \underline{\hspace{1cm}} \frac{3}{5}$ |
| 46) $3\frac{6}{9} \underline{\hspace{1cm}} \frac{34}{9}$ | 48) $\frac{4}{10} \underline{\hspace{1cm}} \frac{2}{5}$    | 50) $\frac{4}{6} \underline{\hspace{1cm}} \frac{9}{6}$   | 52) $\frac{3}{6} \underline{\hspace{1cm}} \frac{9}{18}$ |

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Advanced Fractions to Decimals: 9 [ B ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Convert common fractions to decimals**

- 1)  $\frac{4}{5} =$  \_\_\_\_\_ 6)  $\frac{3}{20} =$  \_\_\_\_\_
- 2)  $\frac{1}{2} =$  \_\_\_\_\_ 7)  $\frac{12}{50} =$  \_\_\_\_\_
- 3)  $\frac{2}{25} =$  \_\_\_\_\_ 8)  $\frac{23}{50} =$  \_\_\_\_\_
- 4)  $\frac{44}{50} =$  \_\_\_\_\_ 9)  $\frac{15}{25} =$  \_\_\_\_\_
- 5)  $\frac{7}{20} =$  \_\_\_\_\_ 10)  $\frac{1}{20} =$  \_\_\_\_\_

**Convert mixed numbers to decimals**

- 11)  $5\frac{1}{5} =$  \_\_\_\_\_ 16)  $8\frac{1}{2} =$  \_\_\_\_\_
- 12)  $8\frac{3}{20} =$  \_\_\_\_\_ 17)  $6\frac{34}{50} =$  \_\_\_\_\_
- 13)  $2\frac{11}{25} =$  \_\_\_\_\_ 18)  $4\frac{5}{20} =$  \_\_\_\_\_
- 14)  $3\frac{21}{25} =$  \_\_\_\_\_ 19)  $2\frac{9}{20} =$  \_\_\_\_\_
- 15)  $4\frac{15}{20} =$  \_\_\_\_\_ 20)  $7\frac{8}{50} =$  \_\_\_\_\_

**Equivalent fractions**

- 21)  $\frac{2}{4} = \frac{8}{\quad} = \frac{\quad}{20}$  24)  $\frac{2}{6} = \frac{4}{\quad} = \frac{\quad}{48}$  27)  $\frac{6}{8} = \frac{\quad}{80} = \frac{\quad}{72}$  30)  $\frac{1}{3} = \frac{\quad}{9} = \frac{10}{\quad}$
- 22)  $\frac{6}{8} = \frac{\quad}{48} = \frac{60}{\quad}$  25)  $\frac{3}{6} = \frac{\quad}{18} = \frac{\quad}{48}$  28)  $\frac{1}{2} = \frac{3}{\quad} = \frac{6}{\quad}$  31)  $\frac{2}{5} = \frac{14}{\quad} = \frac{4}{\quad}$
- 23)  $\frac{2}{3} = \frac{12}{\quad} = \frac{14}{\quad}$  26)  $\frac{2}{3} = \frac{4}{\quad} = \frac{\quad}{12}$  29)  $\frac{1}{6} = \frac{4}{\quad} = \frac{5}{\quad}$  32)  $\frac{1}{6} = \frac{\quad}{12} = \frac{5}{\quad}$

**Multiplying fractions by whole numbers**

- 33)  $\frac{1}{7}$  of 7 = \_\_\_\_\_ 37)  $\frac{8}{9}$  of 27 = \_\_\_\_\_
- 34)  $\frac{7}{10}$  of 20 = \_\_\_\_\_ 38)  $\frac{1}{4}$  of 16 = \_\_\_\_\_
- 35)  $\frac{2}{6}$  of 18 = \_\_\_\_\_ 39)  $\frac{5}{7}$  of 7 = \_\_\_\_\_
- 36)  $\frac{5}{7}$  of 28 = \_\_\_\_\_ 40)  $\frac{1}{3}$  of 42 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

- 41)  $45 \times \frac{3}{5} =$  \_\_\_\_\_ 45)  $8 \times \frac{1}{8} =$  \_\_\_\_\_
- 42)  $36 \times \frac{1}{3} =$  \_\_\_\_\_ 46)  $45 \times \frac{2}{3} =$  \_\_\_\_\_
- 43)  $36 \times \frac{6}{9} =$  \_\_\_\_\_ 47)  $4 \times \frac{3}{4} =$  \_\_\_\_\_
- 44)  $24 \times \frac{5}{8} =$  \_\_\_\_\_ 48)  $36 \times \frac{2}{3} =$  \_\_\_\_\_

**Improper Fractions to Mixed Numbers**

- 49)  $\frac{15}{5} =$  \_\_\_\_\_ 53)  $\frac{65}{8} =$  \_\_\_\_\_
- 50)  $\frac{10}{4} =$  \_\_\_\_\_ 54)  $\frac{16}{6} =$  \_\_\_\_\_
- 51)  $\frac{15}{8} =$  \_\_\_\_\_ 55)  $\frac{13}{4} =$  \_\_\_\_\_
- 52)  $\frac{21}{5} =$  \_\_\_\_\_ 56)  $\frac{19}{3} =$  \_\_\_\_\_

**Mixed Numbers to Improper Fractions**

- 57)  $8\frac{3}{4} =$  \_\_\_\_\_ 61)  $9\frac{2}{6} =$  \_\_\_\_\_
- 58)  $7 = \frac{\quad}{3}$  62)  $2\frac{4}{6} =$  \_\_\_\_\_
- 59)  $8\frac{8}{10} =$  \_\_\_\_\_ 63)  $8\frac{2}{4} =$  \_\_\_\_\_
- 60)  $2\frac{5}{6} =$  \_\_\_\_\_ 64)  $9 = \frac{\quad}{4}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Advanced Fractions to Decimals: 9 [ C ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Convert common fractions to decimals**

- 1)  $\frac{1}{2} =$  \_\_\_\_\_ 6)  $\frac{15}{50} =$  \_\_\_\_\_
- 2)  $\frac{9}{20} =$  \_\_\_\_\_ 7)  $\frac{6}{25} =$  \_\_\_\_\_
- 3)  $\frac{6}{25} =$  \_\_\_\_\_ 8)  $\frac{13}{50} =$  \_\_\_\_\_
- 4)  $\frac{1}{5} =$  \_\_\_\_\_ 9)  $\frac{10}{20} =$  \_\_\_\_\_
- 5)  $\frac{48}{50} =$  \_\_\_\_\_ 10)  $\frac{22}{25} =$  \_\_\_\_\_

**Convert mixed numbers to decimals**

- 11)  $5\frac{9}{25} =$  \_\_\_\_\_ 16)  $1\frac{27}{50} =$  \_\_\_\_\_
- 12)  $7\frac{4}{20} =$  \_\_\_\_\_ 17)  $2\frac{4}{5} =$  \_\_\_\_\_
- 13)  $9\frac{1}{2} =$  \_\_\_\_\_ 18)  $5\frac{13}{25} =$  \_\_\_\_\_
- 14)  $8\frac{1}{5} =$  \_\_\_\_\_ 19)  $4\frac{1}{20} =$  \_\_\_\_\_
- 15)  $1\frac{13}{50} =$  \_\_\_\_\_ 20)  $8\frac{3}{20} =$  \_\_\_\_\_

**Subtract the fractions**

- 21)  $6\frac{5}{10}$   
-  $4\frac{9}{10}$   
\_\_\_\_\_
- 23)  $6\frac{3}{8}$   
-  $5\frac{4}{8}$   
\_\_\_\_\_
- 25)  $6\frac{1}{6}$   
-  $2\frac{3}{6}$   
\_\_\_\_\_
- 27)  $8\frac{5}{10}$   
-  $3\frac{8}{10}$   
\_\_\_\_\_
- 22)  $7\frac{1}{12}$   
-  $6\frac{10}{12}$   
\_\_\_\_\_
- 24)  $9\frac{1}{4}$   
-  $5\frac{3}{4}$   
\_\_\_\_\_
- 26)  $9\frac{4}{6}$   
-  $8\frac{5}{6}$   
\_\_\_\_\_
- 28)  $8\frac{8}{10}$   
-  $1\frac{9}{10}$   
\_\_\_\_\_

**Multiplying fractions by whole numbers**

- 29)  $\frac{2}{4}$  of 12 = \_\_\_\_\_ 33)  $\frac{2}{10}$  of 40 = \_\_\_\_\_
- 30)  $\frac{1}{2}$  of 18 = \_\_\_\_\_ 34)  $\frac{1}{2}$  of 8 = \_\_\_\_\_
- 31)  $\frac{1}{8}$  of 24 = \_\_\_\_\_ 35)  $\frac{5}{9}$  of 9 = \_\_\_\_\_
- 32)  $\frac{3}{5}$  of 30 = \_\_\_\_\_ 36)  $\frac{1}{3}$  of 12 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

- 37)  $9 \times \frac{3}{9} =$  \_\_\_\_\_ 41)  $45 \times \frac{1}{5} =$  \_\_\_\_\_
- 38)  $24 \times \frac{6}{8} =$  \_\_\_\_\_ 42)  $6 \times \frac{1}{3} =$  \_\_\_\_\_
- 39)  $30 \times \frac{1}{5} =$  \_\_\_\_\_ 43)  $16 \times \frac{1}{2} =$  \_\_\_\_\_
- 40)  $28 \times \frac{5}{7} =$  \_\_\_\_\_ 44)  $10 \times \frac{5}{10} =$  \_\_\_\_\_

**Simplify these fractions**

- 45)  $\frac{6}{24} =$  \_\_\_\_\_ 47)  $\frac{16}{20} =$  \_\_\_\_\_ 49)  $\frac{10}{4} =$  \_\_\_\_\_ 51)  $1\frac{2}{4} =$  \_\_\_\_\_
- 46)  $\frac{10}{6} =$  \_\_\_\_\_ 48)  $\frac{60}{30} =$  \_\_\_\_\_ 50)  $\frac{8}{4} =$  \_\_\_\_\_ 52)  $\frac{7}{3} =$  \_\_\_\_\_

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Advanced Fractions to Decimals: 9 [ D ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Convert common fractions to decimals**

- 1)  $\frac{15}{20} =$  \_\_\_\_\_ 6)  $\frac{30}{50} =$  \_\_\_\_\_
- 2)  $\frac{7}{25} =$  \_\_\_\_\_ 7)  $\frac{9}{25} =$  \_\_\_\_\_
- 3)  $\frac{8}{50} =$  \_\_\_\_\_ 8)  $\frac{11}{25} =$  \_\_\_\_\_
- 4)  $\frac{42}{50} =$  \_\_\_\_\_ 9)  $\frac{2}{25} =$  \_\_\_\_\_
- 5)  $\frac{4}{20} =$  \_\_\_\_\_ 10)  $\frac{1}{5} =$  \_\_\_\_\_

**Convert mixed numbers to decimals**

- 11)  $2\frac{1}{2} =$  \_\_\_\_\_ 16)  $3\frac{1}{5} =$  \_\_\_\_\_
- 12)  $7\frac{41}{50} =$  \_\_\_\_\_ 17)  $5\frac{2}{5} =$  \_\_\_\_\_
- 13)  $1\frac{43}{50} =$  \_\_\_\_\_ 18)  $2\frac{8}{25} =$  \_\_\_\_\_
- 14)  $9\frac{7}{50} =$  \_\_\_\_\_ 19)  $7\frac{18}{50} =$  \_\_\_\_\_
- 15)  $5\frac{6}{25} =$  \_\_\_\_\_ 20)  $8\frac{2}{20} =$  \_\_\_\_\_

**Add the fractions**

- 21)  $2\frac{3}{10}$   
+  $5\frac{3}{10}$   
\_\_\_\_\_
- 22)  $5\frac{1}{5}$   
+  $3\frac{4}{5}$   
\_\_\_\_\_
- 23)  $1\frac{1}{12}$   
+  $5\frac{11}{12}$   
\_\_\_\_\_
- 24)  $3\frac{3}{4}$   
+  $1\frac{1}{4}$   
\_\_\_\_\_
- 25)  $2\frac{3}{6}$   
+  $5\frac{4}{6}$   
\_\_\_\_\_
- 26)  $3\frac{4}{6}$   
+  $3\frac{4}{6}$   
\_\_\_\_\_
- 27)  $6\frac{4}{6}$   
+  $3\frac{1}{6}$   
\_\_\_\_\_
- 28)  $4\frac{10}{12}$   
+  $4\frac{6}{12}$   
\_\_\_\_\_

**Multiplying fractions by whole numbers**

- 29)  $\frac{1}{8}$  of 40 = \_\_\_\_\_ 32)  $\frac{4}{10}$  of 40 = \_\_\_\_\_
- 30)  $\frac{4}{5}$  of 25 = \_\_\_\_\_ 33)  $\frac{1}{8}$  of 32 = \_\_\_\_\_
- 31)  $\frac{1}{4}$  of 24 = \_\_\_\_\_ 34)  $\frac{5}{8}$  of 16 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

- 35)  $18 \times \frac{1}{2} =$  \_\_\_\_\_ 38)  $15 \times \frac{1}{3} =$  \_\_\_\_\_
- 36)  $32 \times \frac{7}{8} =$  \_\_\_\_\_ 39)  $42 \times \frac{5}{6} =$  \_\_\_\_\_
- 37)  $20 \times \frac{2}{4} =$  \_\_\_\_\_ 40)  $24 \times \frac{3}{4} =$  \_\_\_\_\_

**Simplify these fractions**

- 41)  $\frac{48}{30} =$  \_\_\_\_\_ 44)  $\frac{14}{6} =$  \_\_\_\_\_ 47)  $\frac{32}{8} =$  \_\_\_\_\_ 50)  $\frac{12}{8} =$  \_\_\_\_\_
- 42)  $\frac{15}{12} =$  \_\_\_\_\_ 45)  $\frac{8}{24} =$  \_\_\_\_\_ 48)  $\frac{12}{6} =$  \_\_\_\_\_ 51)  $\frac{8}{12} =$  \_\_\_\_\_
- 43)  $\frac{15}{24} =$  \_\_\_\_\_ 46)  $\frac{2}{16} =$  \_\_\_\_\_ 49)  $\frac{30}{15} =$  \_\_\_\_\_ 52)  $\frac{6}{36} =$  \_\_\_\_\_

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Revision: 10 [ A ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Convert common fractions to decimals**

- 1)  $\frac{4}{5} =$  \_\_\_\_\_ 6)  $\frac{2}{20} =$  \_\_\_\_\_
- 2)  $\frac{18}{50} =$  \_\_\_\_\_ 7)  $\frac{43}{50} =$  \_\_\_\_\_
- 3)  $\frac{14}{20} =$  \_\_\_\_\_ 8)  $\frac{18}{20} =$  \_\_\_\_\_
- 4)  $\frac{1}{2} =$  \_\_\_\_\_ 9)  $\frac{40}{50} =$  \_\_\_\_\_
- 5)  $\frac{7}{20} =$  \_\_\_\_\_ 10)  $\frac{3}{5} =$  \_\_\_\_\_

**Convert mixed numbers to decimals**

- 11)  $\frac{2}{5} =$  \_\_\_\_\_ 16)  $\frac{18}{20} =$  \_\_\_\_\_
- 12)  $\frac{5}{20} =$  \_\_\_\_\_ 17)  $\frac{1}{2} =$  \_\_\_\_\_
- 13)  $\frac{25}{50} =$  \_\_\_\_\_ 18)  $\frac{36}{50} =$  \_\_\_\_\_
- 14)  $\frac{12}{25} =$  \_\_\_\_\_ 19)  $\frac{46}{50} =$  \_\_\_\_\_
- 15)  $\frac{8}{20} =$  \_\_\_\_\_ 20)  $\frac{22}{25} =$  \_\_\_\_\_

**Equivalent fractions**

- 21)  $\frac{5}{8} = \frac{\quad}{32} = \frac{\quad}{56}$  24)  $\frac{2}{3} = \frac{4}{\quad} = \frac{8}{\quad}$  27)  $\frac{1}{2} = \frac{6}{\quad} = \frac{2}{\quad}$  30)  $\frac{1}{2} = \frac{\quad}{8} = \frac{\quad}{12}$
- 22)  $\frac{1}{2} = \frac{4}{\quad} = \frac{\quad}{20}$  25)  $\frac{1}{5} = \frac{\quad}{15} = \frac{\quad}{10}$  28)  $\frac{3}{5} = \frac{\quad}{15} = \frac{\quad}{10}$  31)  $\frac{5}{6} = \frac{\quad}{36} = \frac{\quad}{12}$
- 23)  $\frac{1}{2} = \frac{9}{\quad} = \frac{7}{\quad}$  26)  $\frac{1}{3} = \frac{4}{\quad} = \frac{9}{\quad}$  29)  $\frac{7}{8} = \frac{\quad}{64} = \frac{\quad}{24}$  32)  $\frac{7}{8} = \frac{\quad}{80} = \frac{49}{\quad}$

**Multiplying fractions by whole numbers**

- 33)  $\frac{1}{2}$  of 20 = \_\_\_\_\_ 37)  $\frac{3}{4}$  of 36 = \_\_\_\_\_
- 34)  $\frac{1}{3}$  of 27 = \_\_\_\_\_ 38)  $\frac{1}{2}$  of 18 = \_\_\_\_\_
- 35)  $\frac{4}{5}$  of 25 = \_\_\_\_\_ 39)  $\frac{1}{3}$  of 27 = \_\_\_\_\_
- 36)  $\frac{4}{7}$  of 14 = \_\_\_\_\_ 40)  $\frac{3}{7}$  of 21 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

- 41)  $6 \times \frac{2}{6} =$  \_\_\_\_\_ 45)  $12 \times \frac{1}{2} =$  \_\_\_\_\_
- 42)  $24 \times \frac{4}{8} =$  \_\_\_\_\_ 46)  $40 \times \frac{1}{5} =$  \_\_\_\_\_
- 43)  $25 \times \frac{2}{5} =$  \_\_\_\_\_ 47)  $24 \times \frac{2}{6} =$  \_\_\_\_\_
- 44)  $20 \times \frac{4}{5} =$  \_\_\_\_\_ 48)  $12 \times \frac{2}{3} =$  \_\_\_\_\_

**Simplify these fractions**

- 49)  $\frac{65}{50} =$  \_\_\_\_\_ 53)  $\frac{80}{50} =$  \_\_\_\_\_ 57)  $\frac{20}{18} =$  \_\_\_\_\_ 61)  $\frac{24}{24} =$  \_\_\_\_\_
- 50)  $\frac{30}{36} =$  \_\_\_\_\_ 54)  $\frac{9}{18} =$  \_\_\_\_\_ 58)  $\frac{30}{20} =$  \_\_\_\_\_ 62)  $\frac{6}{18} =$  \_\_\_\_\_
- 51)  $\frac{16}{24} =$  \_\_\_\_\_ 55)  $\frac{20}{8} =$  \_\_\_\_\_ 59)  $\frac{60}{20} =$  \_\_\_\_\_ 63)  $\frac{25}{5} =$  \_\_\_\_\_
- 52)  $\frac{3}{12} =$  \_\_\_\_\_ 56)  $\frac{60}{20} =$  \_\_\_\_\_ 60)  $\frac{10}{15} =$  \_\_\_\_\_ 64)  $\frac{15}{15} =$  \_\_\_\_\_

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Revision: 10 [ B ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Convert common fractions to decimals**

- 1)  $\frac{1}{2} =$  \_\_\_\_\_ 6)  $\frac{3}{5} =$  \_\_\_\_\_
- 2)  $\frac{5}{25} =$  \_\_\_\_\_ 7)  $\frac{4}{5} =$  \_\_\_\_\_
- 3)  $\frac{15}{25} =$  \_\_\_\_\_ 8)  $\frac{11}{25} =$  \_\_\_\_\_
- 4)  $\frac{1}{5} =$  \_\_\_\_\_ 9)  $\frac{44}{50} =$  \_\_\_\_\_
- 5)  $\frac{4}{25} =$  \_\_\_\_\_ 10)  $\frac{13}{50} =$  \_\_\_\_\_

**Convert mixed numbers to decimals**

- 11)  $1\frac{1}{2} =$  \_\_\_\_\_ 16)  $5\frac{5}{25} =$  \_\_\_\_\_
- 12)  $25\frac{25}{50} =$  \_\_\_\_\_ 17)  $3\frac{3}{25} =$  \_\_\_\_\_
- 13)  $10\frac{10}{25} =$  \_\_\_\_\_ 18)  $3\frac{3}{5} =$  \_\_\_\_\_
- 14)  $5\frac{5}{25} =$  \_\_\_\_\_ 19)  $9\frac{9}{25} =$  \_\_\_\_\_
- 15)  $2\frac{2}{20} =$  \_\_\_\_\_ 20)  $7\frac{7}{20} =$  \_\_\_\_\_

**Equivalent fractions**

- 21)  $\frac{1}{5} = \frac{4}{20} = \frac{7}{35}$  23)  $\frac{4}{6} = \frac{36}{54} = \frac{2}{3}$  25)  $\frac{1}{3} = \frac{12}{36} = \frac{2}{6}$  27)  $\frac{1}{3} = \frac{6}{18} = \frac{10}{30}$
- 22)  $\frac{1}{5} = \frac{10}{50} = \frac{4}{20}$  24)  $\frac{1}{3} = \frac{24}{72} = \frac{9}{27}$  26)  $\frac{2}{6} = \frac{18}{54} = \frac{1}{3}$  28)  $\frac{1}{3} = \frac{12}{36} = \frac{7}{21}$

**Add the fractions**

- 29)  $2\frac{3}{10} + 5\frac{3}{10} =$  \_\_\_\_\_
- 30)  $5\frac{1}{5} + 3\frac{4}{5} =$  \_\_\_\_\_
- 31)  $1\frac{1}{12} + 5\frac{11}{12} =$  \_\_\_\_\_
- 32)  $2\frac{3}{4} + 3\frac{1}{4} =$  \_\_\_\_\_
- 33)  $1\frac{3}{6} + 8\frac{4}{6} =$  \_\_\_\_\_
- 34)  $3\frac{4}{6} + 3\frac{4}{6} =$  \_\_\_\_\_
- 35)  $6\frac{4}{6} + 3\frac{1}{6} =$  \_\_\_\_\_
- 36)  $4\frac{10}{12} + 4\frac{6}{12} =$  \_\_\_\_\_

**Simplify these fractions**

- 37)  $\frac{16}{24} =$  \_\_\_\_\_ 40)  $\frac{42}{24} =$  \_\_\_\_\_ 43)  $\frac{4}{20} =$  \_\_\_\_\_ 46)  $\frac{60}{40} =$  \_\_\_\_\_
- 38)  $\frac{40}{32} =$  \_\_\_\_\_ 41)  $\frac{12}{15} =$  \_\_\_\_\_ 44)  $\frac{12}{9} =$  \_\_\_\_\_ 47)  $\frac{18}{8} =$  \_\_\_\_\_
- 39)  $\frac{36}{16} =$  \_\_\_\_\_ 42)  $\frac{30}{50} =$  \_\_\_\_\_ 45)  $\frac{24}{12} =$  \_\_\_\_\_ 48)  $\frac{2}{8} =$  \_\_\_\_\_

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Revision: 10 [ C ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Convert common fractions to decimals**

- 1)  $\frac{5}{25} =$  \_\_\_\_\_ 6)  $\frac{1}{2} =$  \_\_\_\_\_  
 2)  $\frac{4}{50} =$  \_\_\_\_\_ 7)  $\frac{1}{20} =$  \_\_\_\_\_  
 3)  $\frac{12}{25} =$  \_\_\_\_\_ 8)  $\frac{23}{50} =$  \_\_\_\_\_  
 4)  $\frac{43}{50} =$  \_\_\_\_\_ 9)  $\frac{19}{20} =$  \_\_\_\_\_  
 5)  $\frac{8}{25} =$  \_\_\_\_\_ 10)  $\frac{1}{5} =$  \_\_\_\_\_

**Convert mixed numbers to decimals**

- 11)  $\frac{5}{25} =$  \_\_\_\_\_ 16)  $\frac{7}{50} =$  \_\_\_\_\_  
 12)  $\frac{1}{5} =$  \_\_\_\_\_ 17)  $\frac{4}{5} =$  \_\_\_\_\_  
 13)  $\frac{1}{2} =$  \_\_\_\_\_ 18)  $\frac{1}{25} =$  \_\_\_\_\_  
 14)  $\frac{23}{50} =$  \_\_\_\_\_ 19)  $\frac{2}{5} =$  \_\_\_\_\_  
 15)  $\frac{47}{50} =$  \_\_\_\_\_ 20)  $\frac{11}{20} =$  \_\_\_\_\_

**Equivalent fractions**

- 21)  $\frac{1}{2} = \frac{2}{4} = \frac{3}{6}$  23)  $\frac{4}{6} = \frac{16}{24} = \frac{2}{3}$  25)  $\frac{4}{5} = \frac{8}{10} = \frac{16}{20}$  27)  $\frac{5}{6} = \frac{10}{12} = \frac{15}{18}$   
 22)  $\frac{1}{4} = \frac{9}{36} = \frac{6}{24}$  24)  $\frac{3}{4} = \frac{15}{20} = \frac{6}{8}$  26)  $\frac{1}{5} = \frac{2}{10} = \frac{4}{20}$  28)  $\frac{1}{6} = \frac{2}{12} = \frac{3}{18}$

**Multiplying fractions by whole numbers**

- 29)  $\frac{4}{10}$  of 10 = \_\_\_\_\_ 33)  $\frac{1}{2}$  of 14 = \_\_\_\_\_  
 30)  $\frac{3}{4}$  of 36 = \_\_\_\_\_ 34)  $\frac{4}{7}$  of 14 = \_\_\_\_\_  
 31)  $\frac{6}{10}$  of 20 = \_\_\_\_\_ 35)  $\frac{2}{3}$  of 9 = \_\_\_\_\_  
 32)  $\frac{2}{3}$  of 15 = \_\_\_\_\_ 36)  $\frac{3}{7}$  of 14 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

- 37)  $18 \times \frac{1}{2} =$  \_\_\_\_\_ 41)  $10 \times \frac{9}{10} =$  \_\_\_\_\_  
 38)  $14 \times \frac{1}{2} =$  \_\_\_\_\_ 42)  $15 \times \frac{1}{5} =$  \_\_\_\_\_  
 39)  $21 \times \frac{4}{7} =$  \_\_\_\_\_ 43)  $9 \times \frac{2}{9} =$  \_\_\_\_\_  
 40)  $42 \times \frac{5}{6} =$  \_\_\_\_\_ 44)  $14 \times \frac{3}{7} =$  \_\_\_\_\_

**Simplify these fractions**

- 45)  $\frac{3}{9} =$  \_\_\_\_\_ 49)  $\frac{21}{24} =$  \_\_\_\_\_ 53)  $\frac{35}{15} =$  \_\_\_\_\_ 57)  $\frac{8}{16} =$  \_\_\_\_\_  
 46)  $\frac{24}{18} =$  \_\_\_\_\_ 50)  $\frac{4}{12} =$  \_\_\_\_\_ 54)  $\frac{18}{15} =$  \_\_\_\_\_ 58)  $\frac{8}{24} =$  \_\_\_\_\_  
 47)  $\frac{18}{12} =$  \_\_\_\_\_ 51)  $\frac{24}{12} =$  \_\_\_\_\_ 55)  $\frac{9}{18} =$  \_\_\_\_\_ 59)  $\frac{30}{15} =$  \_\_\_\_\_  
 48)  $\frac{90}{40} =$  \_\_\_\_\_ 52)  $\frac{9}{12} =$  \_\_\_\_\_ 56)  $\frac{12}{16} =$  \_\_\_\_\_ 60)  $\frac{4}{12} =$  \_\_\_\_\_

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Revision: 10 [ D ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Convert common fractions to decimals**

- 1)  $\frac{1}{2} =$  \_\_\_\_\_ 6)  $\frac{10}{25} =$  \_\_\_\_\_
- 2)  $\frac{1}{5} =$  \_\_\_\_\_ 7)  $\frac{6}{25} =$  \_\_\_\_\_
- 3)  $\frac{3}{5} =$  \_\_\_\_\_ 8)  $\frac{7}{25} =$  \_\_\_\_\_
- 4)  $\frac{10}{50} =$  \_\_\_\_\_ 9)  $\frac{20}{25} =$  \_\_\_\_\_
- 5)  $\frac{5}{20} =$  \_\_\_\_\_ 10)  $\frac{11}{20} =$  \_\_\_\_\_

**Convert mixed numbers to decimals**

- 11)  $\frac{1}{2} =$  \_\_\_\_\_ 16)  $\frac{2}{20} =$  \_\_\_\_\_
- 12)  $\frac{3}{25} =$  \_\_\_\_\_ 17)  $\frac{3}{5} =$  \_\_\_\_\_
- 13)  $\frac{4}{5} =$  \_\_\_\_\_ 18)  $\frac{24}{50} =$  \_\_\_\_\_
- 14)  $\frac{11}{20} =$  \_\_\_\_\_ 19)  $\frac{45}{50} =$  \_\_\_\_\_
- 15)  $\frac{1}{20} =$  \_\_\_\_\_ 20)  $\frac{9}{20} =$  \_\_\_\_\_

**Equivalent fractions**

- 21)  $\frac{1}{3} = \frac{\quad}{12} = \frac{3}{\quad}$  23)  $\frac{5}{6} = \frac{\quad}{36} = \frac{50}{\quad}$  25)  $\frac{1}{2} = \frac{\quad}{4} = \frac{8}{\quad}$  27)  $\frac{7}{8} = \frac{\quad}{24} = \frac{\quad}{32}$
- 22)  $\frac{1}{4} = \frac{\quad}{36} = \frac{\quad}{40}$  24)  $\frac{4}{6} = \frac{\quad}{60} = \frac{\quad}{54}$  26)  $\frac{2}{8} = \frac{\quad}{64} = \frac{\quad}{72}$  28)  $\frac{3}{5} = \frac{\quad}{15} = \frac{27}{\quad}$

**Subtract the fractions**

- 29)  $8\frac{2}{5}$   
-  $5\frac{3}{5}$   
\_\_\_\_\_
- 30)  $4\frac{8}{10}$   
-  $1\frac{9}{10}$   
\_\_\_\_\_
- 31)  $6\frac{8}{10}$   
-  $5\frac{9}{10}$   
\_\_\_\_\_
- 32)  $7\frac{1}{3}$   
-  $3\frac{2}{3}$   
\_\_\_\_\_
- 33)  $5\frac{1}{3}$   
-  $4\frac{2}{3}$   
\_\_\_\_\_
- 34)  $9\frac{1}{5}$   
-  $3\frac{3}{5}$   
\_\_\_\_\_
- 35)  $9\frac{3}{12}$   
-  $7\frac{7}{12}$   
\_\_\_\_\_
- 36)  $7\frac{3}{6}$   
-  $6\frac{5}{6}$   
\_\_\_\_\_

**Simplify these fractions**

- 37)  $\frac{9}{24} =$  \_\_\_\_\_ 40)  $\frac{6}{36} =$  \_\_\_\_\_ 43)  $\frac{3}{24} =$  \_\_\_\_\_ 46)  $\frac{6}{24} =$  \_\_\_\_\_
- 38)  $\frac{20}{24} =$  \_\_\_\_\_ 41)  $\frac{20}{15} =$  \_\_\_\_\_ 44)  $\frac{6}{24} =$  \_\_\_\_\_ 47)  $\frac{3}{3} =$  \_\_\_\_\_
- 39)  $\frac{18}{48} =$  \_\_\_\_\_ 42)  $\frac{4}{24} =$  \_\_\_\_\_ 45)  $\frac{5}{15} =$  \_\_\_\_\_ 48)  $\frac{30}{25} =$  \_\_\_\_\_

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# Checkup Worksheets

## Checkup Worksheets

Checkup Worksheets are designed for assessment of students' learning at intervals of two or three weeks.

Note: **Answer keys** for all worksheets are in the Answer Keys Section of this eBook.

Name: \_\_\_\_\_

Score: \_\_\_\_\_

Check Up A



<input type="checkbox"/> x	equivalent	compare	+/- mixed	adv decimals
<input type="checkbox"/> imp/mixed	simplify	+/- common	decimals	revision

**Multiplying unit fractions by whole numbers**

- 1)  $\frac{1}{6}$  of 12 = \_\_\_\_\_ 6)  $\frac{1}{5}$  of 30 = \_\_\_\_\_  
 2)  $\frac{1}{8}$  of 24 = \_\_\_\_\_ 7)  $\frac{1}{9}$  of 36 = \_\_\_\_\_  
 3)  $\frac{1}{9}$  of 9 = \_\_\_\_\_ 8)  $\frac{1}{4}$  of 24 = \_\_\_\_\_  
 4)  $\frac{1}{7}$  of 42 = \_\_\_\_\_ 9)  $\frac{1}{8}$  of 32 = \_\_\_\_\_  
 5)  $\frac{1}{6}$  of 18 = \_\_\_\_\_ 10)  $\frac{1}{2}$  of 16 = \_\_\_\_\_

**Multiplying whole numbers by unit fractions**

- 27)  $32 \times \frac{1}{4} =$  \_\_\_\_\_ 32)  $12 \times \frac{1}{4} =$  \_\_\_\_\_  
 28)  $40 \times \frac{1}{8} =$  \_\_\_\_\_ 33)  $15 \times \frac{1}{5} =$  \_\_\_\_\_  
 29)  $21 \times \frac{1}{7} =$  \_\_\_\_\_ 34)  $27 \times \frac{1}{9} =$  \_\_\_\_\_  
 30)  $28 \times \frac{1}{4} =$  \_\_\_\_\_ 35)  $36 \times \frac{1}{4} =$  \_\_\_\_\_  
 31)  $35 \times \frac{1}{7} =$  \_\_\_\_\_ 36)  $14 \times \frac{1}{2} =$  \_\_\_\_\_

**Multiplying fractions by whole numbers (sequenced)**

- 11)  $\frac{1}{6}$  of 24 = \_\_\_\_\_ 15)  $\frac{1}{10}$  of 30 = \_\_\_\_\_  
 12)  $\frac{3}{6}$  of 24 = \_\_\_\_\_ 16)  $\frac{2}{10}$  of 30 = \_\_\_\_\_  
 13)  $\frac{1}{3}$  of 12 = \_\_\_\_\_ 17)  $\frac{1}{8}$  of 16 = \_\_\_\_\_  
 14)  $\frac{2}{3}$  of 12 = \_\_\_\_\_ 18)  $\frac{3}{8}$  of 16 = \_\_\_\_\_

**Multiplying whole numbers by fractions (sequenced)**

- 37)  $21 \times \frac{1}{7} =$  \_\_\_\_\_ 41)  $30 \times \frac{1}{5} =$  \_\_\_\_\_  
 38)  $21 \times \frac{2}{7} =$  \_\_\_\_\_ 42)  $30 \times \frac{4}{5} =$  \_\_\_\_\_  
 39)  $16 \times \frac{1}{4} =$  \_\_\_\_\_ 43)  $36 \times \frac{1}{6} =$  \_\_\_\_\_  
 40)  $16 \times \frac{3}{4} =$  \_\_\_\_\_ 44)  $36 \times \frac{4}{6} =$  \_\_\_\_\_

**Multiplying fractions by whole numbers**

- 19)  $\frac{5}{6}$  of 48 = \_\_\_\_\_ 23)  $\frac{2}{3}$  of 30 = \_\_\_\_\_  
 20)  $\frac{3}{9}$  of 36 = \_\_\_\_\_ 24)  $\frac{5}{9}$  of 27 = \_\_\_\_\_  
 21)  $\frac{3}{6}$  of 6 = \_\_\_\_\_ 25)  $\frac{4}{8}$  of 16 = \_\_\_\_\_  
 22)  $\frac{1}{3}$  of 12 = \_\_\_\_\_ 26)  $\frac{6}{7}$  of 21 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

- 45)  $28 \times \frac{2}{7} =$  \_\_\_\_\_ 49)  $30 \times \frac{5}{6} =$  \_\_\_\_\_  
 46)  $36 \times \frac{3}{9} =$  \_\_\_\_\_ 50)  $42 \times \frac{4}{6} =$  \_\_\_\_\_  
 47)  $16 \times \frac{2}{4} =$  \_\_\_\_\_ 51)  $45 \times \frac{2}{5} =$  \_\_\_\_\_  
 48)  $42 \times \frac{5}{7} =$  \_\_\_\_\_ 52)  $20 \times \frac{5}{10} =$  \_\_\_\_\_

**Improper Fractions to Mixed Numbers**

- 53)  $\frac{13}{4} =$  \_\_\_\_\_ 57)  $\frac{14}{3} =$  \_\_\_\_\_  
 54)  $\frac{9}{5} =$  \_\_\_\_\_ 58)  $\frac{18}{5} =$  \_\_\_\_\_  
 55)  $\frac{16}{6} =$  \_\_\_\_\_ 59)  $\frac{15}{12} =$  \_\_\_\_\_  
 56)  $\frac{27}{10} =$  \_\_\_\_\_ 60)  $\frac{10}{5} =$  \_\_\_\_\_

**Mixed Numbers to Improper Fractions**

- 61)  $4 \frac{1}{4} =$  \_\_\_\_\_ 65)  $1 \frac{5}{6} =$  \_\_\_\_\_  
 62)  $3 = \frac{\quad}{3}$  66)  $2 \frac{6}{8} =$  \_\_\_\_\_  
 63)  $3 \frac{4}{10} =$  \_\_\_\_\_ 67)  $1 \frac{2}{12} =$  \_\_\_\_\_  
 64)  $5 \frac{2}{3} =$  \_\_\_\_\_ 68)  $4 \frac{4}{5} =$  \_\_\_\_\_

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Check Up B



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Equivalent fractions**

1)  $\frac{1}{2} = \frac{8}{16} = \frac{7}{14}$

4)  $\frac{3}{4} = \frac{21}{28} = \frac{12}{16}$

7)  $\frac{1}{2} = \frac{5}{10} = \frac{10}{20}$

2)  $\frac{2}{6} = \frac{12}{36} = \frac{10}{30}$

5)  $\frac{1}{2} = \frac{12}{24} = \frac{20}{40}$

8)  $\frac{4}{5} = \frac{24}{30} = \frac{20}{25}$

3)  $\frac{1}{8} = \frac{8}{64} = \frac{10}{80}$

6)  $\frac{2}{6} = \frac{18}{54} = \frac{10}{30}$

9)  $\frac{3}{8} = \frac{27}{72} = \frac{15}{40}$

**Simplify these fractions**

10)  $\frac{32}{48} =$  \_\_\_\_\_

13)  $\frac{6}{48} =$  \_\_\_\_\_

16)  $\frac{10}{30} =$  \_\_\_\_\_

19)  $\frac{6}{16} =$  \_\_\_\_\_

11)  $\frac{8}{12} =$  \_\_\_\_\_

14)  $\frac{25}{30} =$  \_\_\_\_\_

17)  $\frac{6}{8} =$  \_\_\_\_\_

20)  $\frac{2}{8} =$  \_\_\_\_\_

12)  $\frac{20}{32} =$  \_\_\_\_\_

15)  $\frac{4}{24} =$  \_\_\_\_\_

18)  $\frac{10}{12} =$  \_\_\_\_\_

21)  $\frac{15}{20} =$  \_\_\_\_\_

**Simplify these fractions, show as a mixed number**

22)  $\frac{24}{18} =$  \_\_\_\_\_

26)  $\frac{14}{12} =$  \_\_\_\_\_

30)  $\frac{80}{30} =$  \_\_\_\_\_

23)  $\frac{45}{30} =$  \_\_\_\_\_

27)  $\frac{32}{16} =$  \_\_\_\_\_

31)  $\frac{20}{12} =$  \_\_\_\_\_

24)  $\frac{36}{30} =$  \_\_\_\_\_

28)  $\frac{28}{20} =$  \_\_\_\_\_

32)  $\frac{30}{18} =$  \_\_\_\_\_

25)  $\frac{50}{40} =$  \_\_\_\_\_

29)  $\frac{12}{8} =$  \_\_\_\_\_

33)  $\frac{45}{25} =$  \_\_\_\_\_

**Multiplying fractions by whole numbers**

34)  $\frac{3}{9}$  of 18 = \_\_\_\_\_

37)  $\frac{7}{9}$  of 9 = \_\_\_\_\_

35)  $\frac{5}{6}$  of 36 = \_\_\_\_\_

38)  $\frac{2}{5}$  of 25 = \_\_\_\_\_

36)  $\frac{2}{3}$  of 24 = \_\_\_\_\_

39)  $\frac{5}{10}$  of 20 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

40)  $20 \times \frac{2}{5} =$  \_\_\_\_\_

43)  $21 \times \frac{6}{7} =$  \_\_\_\_\_

41)  $24 \times \frac{5}{6} =$  \_\_\_\_\_

44)  $10 \times \frac{8}{10} =$  \_\_\_\_\_

42)  $32 \times \frac{6}{8} =$  \_\_\_\_\_

45)  $4 \times \frac{2}{4} =$  \_\_\_\_\_

This worksheet is part of the Professor Pete's Classroom eBook "Bring It On! Fractions Worksheets". This Check Up sheet should be used to assess students' progress after completing worksheet 4D.

Name: \_\_\_\_\_

Score: \_\_\_\_\_

Check Up C



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

Insert &lt;, &gt; or =

1)  $\frac{1}{2}$  \_\_\_\_\_  $\frac{5}{8}$

6)  $\frac{3}{5}$  \_\_\_\_\_  $\frac{3}{4}$

11)  $\frac{21}{5}$  \_\_\_\_\_  $4\frac{1}{5}$

16)  $3\frac{1}{5}$  \_\_\_\_\_  $\frac{17}{5}$

2)  $\frac{5}{8}$  \_\_\_\_\_  $\frac{4}{8}$

7)  $\frac{6}{8}$  \_\_\_\_\_  $\frac{6}{10}$

12)  $\frac{22}{4}$  \_\_\_\_\_  $5\frac{1}{4}$

17)  $3\frac{1}{3}$  \_\_\_\_\_  $\frac{11}{3}$

3)  $\frac{3}{6}$  \_\_\_\_\_  $\frac{1}{2}$

8)  $\frac{2}{4}$  \_\_\_\_\_  $\frac{7}{8}$

13)  $2\frac{4}{8}$  \_\_\_\_\_  $\frac{20}{8}$

18)  $5\frac{2}{3}$  \_\_\_\_\_  $\frac{17}{3}$

4)  $\frac{3}{4}$  \_\_\_\_\_  $\frac{1}{4}$

9)  $\frac{1}{4}$  \_\_\_\_\_  $\frac{1}{8}$

14)  $1\frac{1}{4}$  \_\_\_\_\_  $\frac{6}{4}$

19)  $\frac{45}{5}$  \_\_\_\_\_  $9\frac{1}{5}$

5)  $\frac{6}{8}$  \_\_\_\_\_  $\frac{1}{8}$

10)  $\frac{2}{8}$  \_\_\_\_\_  $\frac{5}{8}$

15)  $4\frac{1}{6}$  \_\_\_\_\_  $\frac{25}{6}$

20)  $3\frac{2}{4}$  \_\_\_\_\_  $\frac{14}{4}$

Add the fractions and simplify

21)  $\frac{2}{5} + \frac{2}{5} =$  \_\_\_\_\_

25)  $\frac{1}{8} + \frac{4}{8} =$  \_\_\_\_\_

22)  $\frac{2}{12} + \frac{7}{12} =$  \_\_\_\_\_

26)  $\frac{2}{4} + \frac{2}{4} =$  \_\_\_\_\_

23)  $\frac{1}{4} + \frac{2}{4} =$  \_\_\_\_\_

27)  $\frac{1}{10} + \frac{5}{10} =$  \_\_\_\_\_

24)  $\frac{2}{3} + \frac{1}{3} =$  \_\_\_\_\_

28)  $\frac{7}{12} + \frac{2}{12} =$  \_\_\_\_\_

Add the fractions (vertically) and simplify

35)  $\frac{5}{10}$

37)  $\frac{2}{6}$

39)  $2\frac{4}{5}$

+  $\frac{2}{10}$

+  $\frac{3}{6}$

+  $3\frac{3}{5}$

36)  $1\frac{4}{6}$

38)  $4\frac{1}{8}$

40)  $2\frac{6}{10}$

+  $2\frac{5}{6}$

+  $3\frac{7}{8}$

+  $1\frac{8}{10}$

Subtract the fractions (change to improper fractions and simplify where necessary)

29)  $1\frac{1}{3}$

31)  $3\frac{2}{4}$

33)  $1\frac{2}{12}$

-  $\frac{2}{3}$

-  $1\frac{3}{4}$

-  $\frac{4}{12}$

30)  $1\frac{2}{4}$

32)  $5\frac{4}{10}$

34)  $3\frac{3}{5}$

-  $\frac{3}{4}$

-  $2\frac{7}{10}$

-  $2\frac{4}{5}$

Subtract the fractions and simplify

41)  $\frac{2}{3} - \frac{1}{3} =$  \_\_\_\_\_

45)  $\frac{3}{4} - \frac{2}{4} =$  \_\_\_\_\_

42)  $\frac{4}{5} - \frac{2}{5} =$  \_\_\_\_\_

46)  $\frac{7}{8} - \frac{3}{8} =$  \_\_\_\_\_

43)  $\frac{10}{12} - \frac{5}{12} =$  \_\_\_\_\_

47)  $\frac{7}{10} - \frac{4}{10} =$  \_\_\_\_\_

44)  $\frac{6}{12} - \frac{3}{12} =$  \_\_\_\_\_

48)  $\frac{3}{6} - \frac{2}{6} =$  \_\_\_\_\_

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Check Up D



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Convert decimals to common fractions**

- 1)  $0.7 =$  \_\_\_\_\_ 6)  $0.06 =$  \_\_\_\_\_  
 2)  $0.77 =$  \_\_\_\_\_ 7)  $0.21 =$  \_\_\_\_\_  
 3)  $0.6 =$  \_\_\_\_\_ 8)  $0.16 =$  \_\_\_\_\_  
 4)  $0.73 =$  \_\_\_\_\_ 9)  $0.5 =$  \_\_\_\_\_  
 5)  $0.1 =$  \_\_\_\_\_ 10)  $0.65 =$  \_\_\_\_\_

**Convert decimals to mixed numbers**

- 11)  $2.8 =$  \_\_\_\_\_ 16)  $5.3 =$  \_\_\_\_\_  
 12)  $3.94 =$  \_\_\_\_\_ 17)  $4.4 =$  \_\_\_\_\_  
 13)  $7.13 =$  \_\_\_\_\_ 18)  $1.2 =$  \_\_\_\_\_  
 14)  $4.09 =$  \_\_\_\_\_ 19)  $4.69 =$  \_\_\_\_\_  
 15)  $6.9 =$  \_\_\_\_\_ 20)  $4.04 =$  \_\_\_\_\_

**Convert common fractions to decimals**

- 21)  $\frac{6}{20} =$  \_\_\_\_\_ 26)  $\frac{34}{50} =$  \_\_\_\_\_  
 22)  $\frac{4}{25} =$  \_\_\_\_\_ 27)  $\frac{14}{20} =$  \_\_\_\_\_  
 23)  $\frac{4}{5} =$  \_\_\_\_\_ 28)  $\frac{5}{25} =$  \_\_\_\_\_  
 24)  $\frac{1}{2} =$  \_\_\_\_\_ 29)  $\frac{23}{50} =$  \_\_\_\_\_  
 25)  $\frac{6}{20} =$  \_\_\_\_\_ 30)  $\frac{40}{50} =$  \_\_\_\_\_

**Convert mixed numbers to decimals**

- 31)  $5\frac{1}{2} =$  \_\_\_\_\_ 36)  $2\frac{2}{5} =$  \_\_\_\_\_  
 32)  $1\frac{11}{50} =$  \_\_\_\_\_ 37)  $1\frac{1}{5} =$  \_\_\_\_\_  
 33)  $5\frac{23}{50} =$  \_\_\_\_\_ 38)  $3\frac{30}{50} =$  \_\_\_\_\_  
 34)  $7\frac{2}{20} =$  \_\_\_\_\_ 39)  $5\frac{29}{50} =$  \_\_\_\_\_  
 35)  $3\frac{2}{25} =$  \_\_\_\_\_ 40)  $6\frac{15}{20} =$  \_\_\_\_\_

**Insert <, > or =**

- 41)  $\frac{6}{9}$  \_\_\_\_\_  $\frac{4}{12}$  43)  $\frac{4}{6}$  \_\_\_\_\_  $\frac{1}{6}$  45)  $\frac{4}{5}$  \_\_\_\_\_  $\frac{2}{6}$  47)  $2\frac{3}{4}$  \_\_\_\_\_  $\frac{11}{4}$   
 42)  $\frac{2}{9}$  \_\_\_\_\_  $\frac{2}{3}$  44)  $\frac{1}{6}$  \_\_\_\_\_  $\frac{2}{9}$  46)  $3\frac{2}{3}$  \_\_\_\_\_  $\frac{10}{3}$  48)  $\frac{5}{6}$  \_\_\_\_\_  $\frac{1}{3}$

**Multiplying fractions by whole numbers**

- 49)  $\frac{5}{6}$  of 48 = \_\_\_\_\_ 53)  $\frac{2}{3}$  of 27 = \_\_\_\_\_  
 50)  $\frac{9}{10}$  of 10 = \_\_\_\_\_ 54)  $\frac{2}{6}$  of 42 = \_\_\_\_\_  
 51)  $\frac{1}{2}$  of 14 = \_\_\_\_\_ 55)  $\frac{1}{5}$  of 50 = \_\_\_\_\_  
 52)  $\frac{5}{7}$  of 28 = \_\_\_\_\_ 56)  $\frac{3}{4}$  of 4 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

- 57)  $18 \times \frac{1}{2} =$  \_\_\_\_\_ 61)  $40 \times \frac{3}{8} =$  \_\_\_\_\_  
 58)  $16 \times \frac{5}{8} =$  \_\_\_\_\_ 62)  $45 \times \frac{5}{9} =$  \_\_\_\_\_  
 59)  $24 \times \frac{5}{6} =$  \_\_\_\_\_ 63)  $16 \times \frac{3}{8} =$  \_\_\_\_\_  
 60)  $20 \times \frac{4}{5} =$  \_\_\_\_\_ 64)  $18 \times \frac{4}{6} =$  \_\_\_\_\_

This worksheet is part of the Professor Pete's Classroom eBook "Bring It On! Fractions Worksheets". This Check Up sheet should be used to assess students' progress after completing worksheet 8D.

# Homework Sheets



## Homework Sheets

Homework Sheets are designed to be sent home at regular intervals for home-based revision of arithmetic facts. Each sheet includes information for parents to briefly explain the learning strategy being adopted in the classroom, so that parents can offer help to their children that is consistent with what is taught at school.

### Suggested Uses:

1. Use homework sheets for reinforcement of learning in class, by sending matching homework sheets home as each strategy is covered in class.
2. Introduce the program of developing fluency in arithmetic facts at a parent evening, open day, or parent-teacher interview, for example. Use the occasion to explain to parents the strategies being adopted in your classroom, and invite parents to assist their child to learn by following the Advice to Parents on each homework sheet.

Note: **Answer keys** for all worksheets are in the Answer Keys Section of this eBook.



<input type="checkbox"/> x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Multiplying unit fractions by whole numbers**

- 1)  $\frac{1}{9}$  of 45 = \_\_\_\_\_ 6)  $\frac{1}{5}$  of 15 = \_\_\_\_\_
- 2)  $\frac{1}{4}$  of 32 = \_\_\_\_\_ 7)  $\frac{1}{7}$  of 49 = \_\_\_\_\_
- 3)  $\frac{1}{9}$  of 27 = \_\_\_\_\_ 8)  $\frac{1}{8}$  of 48 = \_\_\_\_\_
- 4)  $\frac{1}{2}$  of 8 = \_\_\_\_\_ 9)  $\frac{1}{4}$  of 40 = \_\_\_\_\_
- 5)  $\frac{1}{9}$  of 18 = \_\_\_\_\_ 10)  $\frac{1}{10}$  of 10 = \_\_\_\_\_

**Multiplying whole numbers by unit fractions**

- 31)  $21 \times \frac{1}{3} =$  \_\_\_\_\_ 36)  $36 \times \frac{1}{9} =$  \_\_\_\_\_
- 32)  $42 \times \frac{1}{6} =$  \_\_\_\_\_ 37)  $40 \times \frac{1}{4} =$  \_\_\_\_\_
- 33)  $28 \times \frac{1}{7} =$  \_\_\_\_\_ 38)  $48 \times \frac{1}{8} =$  \_\_\_\_\_
- 34)  $42 \times \frac{1}{7} =$  \_\_\_\_\_ 39)  $24 \times \frac{1}{3} =$  \_\_\_\_\_
- 35)  $16 \times \frac{1}{4} =$  \_\_\_\_\_ 40)  $5 \times \frac{1}{5} =$  \_\_\_\_\_

**Multiplying fractions by whole numbers**

- 11)  $\frac{1}{6}$  of 24 = \_\_\_\_\_ 21)  $\frac{1}{5}$  of 45 = \_\_\_\_\_
- 12)  $\frac{2}{6}$  of 24 = \_\_\_\_\_ 22)  $\frac{2}{5}$  of 45 = \_\_\_\_\_
- 13)  $\frac{1}{9}$  of 54 = \_\_\_\_\_ 23)  $\frac{1}{8}$  of 56 = \_\_\_\_\_
- 14)  $\frac{3}{9}$  of 54 = \_\_\_\_\_ 24)  $\frac{4}{8}$  of 56 = \_\_\_\_\_
- 15)  $\frac{1}{3}$  of 18 = \_\_\_\_\_ 25)  $\frac{1}{7}$  of 42 = \_\_\_\_\_
- 16)  $\frac{2}{3}$  of 18 = \_\_\_\_\_ 26)  $\frac{3}{7}$  of 42 = \_\_\_\_\_
- 17)  $\frac{1}{4}$  of 32 = \_\_\_\_\_ 27)  $\frac{1}{6}$  of 30 = \_\_\_\_\_
- 18)  $\frac{3}{4}$  of 32 = \_\_\_\_\_ 28)  $\frac{5}{6}$  of 30 = \_\_\_\_\_
- 19)  $\frac{1}{7}$  of 28 = \_\_\_\_\_ 29)  $\frac{1}{10}$  of 70 = \_\_\_\_\_
- 20)  $\frac{3}{7}$  of 28 = \_\_\_\_\_ 30)  $\frac{7}{10}$  of 70 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

- 41)  $36 \times \frac{1}{6} =$  \_\_\_\_\_ 51)  $24 \times \frac{1}{6} =$  \_\_\_\_\_
- 42)  $36 \times \frac{3}{6} =$  \_\_\_\_\_ 52)  $24 \times \frac{2}{6} =$  \_\_\_\_\_
- 43)  $63 \times \frac{1}{9} =$  \_\_\_\_\_ 53)  $42 \times \frac{1}{6} =$  \_\_\_\_\_
- 44)  $63 \times \frac{5}{9} =$  \_\_\_\_\_ 54)  $42 \times \frac{3}{6} =$  \_\_\_\_\_
- 45)  $30 \times \frac{1}{10} =$  \_\_\_\_\_ 55)  $81 \times \frac{1}{9} =$  \_\_\_\_\_
- 46)  $30 \times \frac{8}{10} =$  \_\_\_\_\_ 56)  $81 \times \frac{3}{9} =$  \_\_\_\_\_
- 47)  $18 \times \frac{1}{6} =$  \_\_\_\_\_ 57)  $25 \times \frac{1}{5} =$  \_\_\_\_\_
- 48)  $18 \times \frac{4}{6} =$  \_\_\_\_\_ 58)  $25 \times \frac{3}{5} =$  \_\_\_\_\_
- 49)  $36 \times \frac{1}{9} =$  \_\_\_\_\_ 59)  $32 \times \frac{1}{8} =$  \_\_\_\_\_
- 50)  $36 \times \frac{5}{9} =$  \_\_\_\_\_ 60)  $32 \times \frac{3}{8} =$  \_\_\_\_\_

**Revision**

- 61)  $7 + 8 =$  \_\_\_\_\_ 65)  $7 + 6 =$  \_\_\_\_\_ 69)  $4 - 2 =$  \_\_\_\_\_ 73)  $10 - 0 =$  \_\_\_\_\_
- 62)  $7 + 7 =$  \_\_\_\_\_ 66)  $7 + 3 =$  \_\_\_\_\_ 70)  $12 - 6 =$  \_\_\_\_\_ 74)  $15 - 7 =$  \_\_\_\_\_
- 63)  $8 + 2 =$  \_\_\_\_\_ 67)  $6 + 7 =$  \_\_\_\_\_ 71)  $6 - 3 =$  \_\_\_\_\_ 75)  $17 - 9 =$  \_\_\_\_\_
- 64)  $8 + 6 =$  \_\_\_\_\_ 68)  $9 + 7 =$  \_\_\_\_\_ 72)  $20 - 10 =$  \_\_\_\_\_ 76)  $9 - 5 =$  \_\_\_\_\_

This worksheet is part of the Professor Pete's Classroom eBook "Bring It On! Fractions Worksheets". The recommended teaching sequence is shown in the bar at the top of this sheet.

## Homework

## Improper and Mixed Numbers: 2 HW



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

## Converting Mixed Numbers to Improper Fractions:

- Remember:

$$2\frac{3}{5} \quad \frac{5}{5} + \frac{5}{5} + \frac{3}{5} = \frac{13}{5} \quad \text{or} \quad (2 \times \frac{5}{5}) + \frac{3}{5} = \frac{13}{5}$$

## Mixed numbers to improper fractions

- |                            |                            |                             |                             |
|----------------------------|----------------------------|-----------------------------|-----------------------------|
| 1) $3\frac{2}{4} =$ _____  | 6) $4 = \frac{\quad}{6}$   | 11) $2\frac{4}{7} =$ _____  | 16) $10\frac{2}{3} =$ _____ |
| 2) $4 = \frac{\quad}{5}$   | 7) $5\frac{2}{3} =$ _____  | 12) $2 = \frac{\quad}{2}$   | 17) $7\frac{6}{10} =$ _____ |
| 3) $3\frac{7}{8} =$ _____  | 8) $9 = \frac{\quad}{8}$   | 13) $5\frac{3}{4} =$ _____  | 18) $3\frac{1}{4} =$ _____  |
| 4) $2\frac{4}{10} =$ _____ | 9) $3\frac{1}{2} =$ _____  | 14) $2\frac{3}{4} =$ _____  | 19) $7 = \frac{\quad}{8}$   |
| 5) $7\frac{2}{8} =$ _____  | 10) $7\frac{5}{6} =$ _____ | 15) $1\frac{3}{12} =$ _____ | 20) $8\frac{1}{3} =$ _____  |

## Converting Improper Fractions to Mixed Numbers:

- Remember:

$$\frac{11}{4} \quad 11 \div 4 = 2 \text{ with a remainder of } 3 \quad \text{so the mixed number is } 2\frac{3}{4}$$

## Improper fractions to mixed numbers

- |                            |                            |                            |                            |
|----------------------------|----------------------------|----------------------------|----------------------------|
| 21) $\frac{14}{6} =$ _____ | 26) $\frac{13}{4} =$ _____ | 31) $\frac{12}{3} =$ _____ | 36) $\frac{8}{2} =$ _____  |
| 22) $\frac{7}{5} =$ _____  | 27) $\frac{12}{5} =$ _____ | 32) $\frac{18}{4} =$ _____ | 37) $\frac{17}{5} =$ _____ |
| 23) $\frac{10}{6} =$ _____ | 28) $\frac{13}{5} =$ _____ | 33) $\frac{16}{5} =$ _____ | 38) $\frac{16}{3} =$ _____ |
| 24) $\frac{15}{5} =$ _____ | 29) $\frac{11}{4} =$ _____ | 34) $\frac{24}{5} =$ _____ | 39) $\frac{16}{4} =$ _____ |
| 25) $\frac{25}{8} =$ _____ | 30) $\frac{10}{4} =$ _____ | 35) $\frac{10}{5} =$ _____ | 40) $\frac{11}{2} =$ _____ |

## Revision

- |                     |                     |                      |                       |
|---------------------|---------------------|----------------------|-----------------------|
| 41) $8 + 7 =$ _____ | 46) $7 + 2 =$ _____ | 51) $5 - 3 =$ _____  | 56) $18 - 10 =$ _____ |
| 42) $6 + 5 =$ _____ | 47) $6 + 3 =$ _____ | 52) $13 - 5 =$ _____ | 57) $7 - 2 =$ _____   |
| 43) $6 + 6 =$ _____ | 48) $8 + 6 =$ _____ | 53) $19 - 9 =$ _____ | 58) $10 - 8 =$ _____  |
| 44) $6 + 8 =$ _____ | 49) $7 + 5 =$ _____ | 54) $18 - 9 =$ _____ | 59) $15 - 8 =$ _____  |
| 45) $9 + 5 =$ _____ | 50) $9 + 7 =$ _____ | 55) $13 - 6 =$ _____ | 60) $15 - 9 =$ _____  |

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x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Equivalent Fractions:**

Equivalent fractions represent the same amount even though they have different numerators and denominators.

For example:  $\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$

To make an equivalent fraction you have to multiply or divide the numerator and denominator by the same number.

$$\frac{2}{3} = \frac{2 \times 3}{3 \times 3} = \frac{6}{9} \quad \frac{15}{25} = \frac{15 \div 5}{25 \div 5} = \frac{3}{5}$$

**Equivalent Fractions**

1)  $\frac{\quad}{8} = \frac{30}{80}$

6)  $\frac{3}{\quad} = \frac{9}{18}$

11)  $\frac{2}{6} = \frac{\quad}{42}$

16)  $\frac{\quad}{4} = \frac{18}{24}$

2)  $\frac{1}{2} = \frac{\quad}{10}$

7)  $\frac{1}{\quad} = \frac{4}{8}$

12)  $\frac{\quad}{5} = \frac{27}{45}$

17)  $\frac{2}{6} = \frac{4}{\quad}$

3)  $\frac{3}{\quad} = \frac{24}{48}$

8)  $\frac{1}{\quad} = \frac{10}{50}$

13)  $\frac{3}{6} = \frac{9}{\quad}$

18)  $\frac{3}{4} = \frac{27}{\quad}$

4)  $\frac{\quad}{2} = \frac{8}{16}$

9)  $\frac{1}{3} = \frac{\quad}{6}$

14)  $\frac{1}{5} = \frac{\quad}{35}$

19)  $\frac{5}{6} = \frac{\quad}{30}$

5)  $\frac{2}{6} = \frac{14}{\quad}$

10)  $\frac{\quad}{8} = \frac{25}{40}$

15)  $\frac{4}{\quad} = \frac{36}{54}$

20)  $\frac{\quad}{5} = \frac{4}{20}$

**Multiplying fractions by whole numbers**

21)  $\frac{1}{3}$  of 18 =  $\underline{\quad}$

26)  $\frac{1}{2}$  of 18 =  $\underline{\quad}$

22)  $\frac{2}{3}$  of 18 =  $\underline{\quad}$

27)  $\frac{1}{8}$  of 64 =  $\underline{\quad}$

23)  $\frac{1}{10}$  of 50 =  $\underline{\quad}$

28)  $\frac{6}{8}$  of 64 =  $\underline{\quad}$

24)  $\frac{9}{10}$  of 50 =  $\underline{\quad}$

29)  $\frac{1}{5}$  of 35 =  $\underline{\quad}$

25)  $\frac{1}{5}$  of 40 =  $\underline{\quad}$

30)  $\frac{3}{5}$  of 45 =  $\underline{\quad}$

**Multiplying whole numbers by fractions**

31)  $27 \times \frac{1}{9} = \underline{\quad}$

36)  $24 \times \frac{3}{4} = \underline{\quad}$

32)  $27 \times \frac{5}{9} = \underline{\quad}$

37)  $36 \times \frac{3}{4} = \underline{\quad}$

33)  $12 \times \frac{2}{4} = \underline{\quad}$

38)  $12 \times \frac{2}{6} = \underline{\quad}$

34)  $24 \times \frac{1}{3} = \underline{\quad}$

39)  $30 \times \frac{1}{6} = \underline{\quad}$

35)  $5 \times \frac{4}{5} = \underline{\quad}$

40)  $49 \times \frac{4}{7} = \underline{\quad}$

**Revision**

41)  $6 + 2 = \underline{\quad}$

46)  $8 + 6 = \underline{\quad}$

51)  $7 - 4 = \underline{\quad}$

56)  $13 - 5 = \underline{\quad}$

42)  $9 + 7 = \underline{\quad}$

47)  $5 + 7 = \underline{\quad}$

52)  $19 - 9 = \underline{\quad}$

57)  $14 - 6 = \underline{\quad}$

43)  $6 + 7 = \underline{\quad}$

48)  $6 + 5 = \underline{\quad}$

53)  $12 - 9 = \underline{\quad}$

58)  $8 - 5 = \underline{\quad}$

44)  $4 + 2 = \underline{\quad}$

49)  $9 + 8 = \underline{\quad}$

54)  $17 - 9 = \underline{\quad}$

59)  $16 - 9 = \underline{\quad}$

45)  $4 + 8 = \underline{\quad}$

50)  $5 + 3 = \underline{\quad}$

55)  $14 - 7 = \underline{\quad}$

60)  $15 - 6 = \underline{\quad}$

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x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Simplifying Fractions:**

Simplifying a fraction means to make an equivalent fraction which has numbers as small as possible.

To do this, find the equivalent fraction with the smallest numbers. This means dividing the numerator and denominator with common factors.

For example:  $\frac{3}{9} = \frac{1}{3}$

In some cases a fraction can be simplified even further if you look harder.  $\frac{6}{12} = \frac{3}{6} = \frac{1}{2}$

**Simplify these fractions**

- |                            |                             |                             |                             |
|----------------------------|-----------------------------|-----------------------------|-----------------------------|
| 1) $\frac{18}{30} =$ _____ | 6) $\frac{2}{6} =$ _____    | 11) $\frac{6}{18} =$ _____  | 16) $\frac{15}{18} =$ _____ |
| 2) $\frac{6}{30} =$ _____  | 7) $\frac{30}{36} =$ _____  | 12) $\frac{10}{15} =$ _____ | 17) $\frac{6}{36} =$ _____  |
| 3) $\frac{4}{12} =$ _____  | 8) $\frac{12}{16} =$ _____  | 13) $\frac{3}{12} =$ _____  | 18) $\frac{12}{15} =$ _____ |
| 4) $\frac{10}{20} =$ _____ | 9) $\frac{20}{40} =$ _____  | 14) $\frac{8}{10} =$ _____  | 19) $\frac{24}{30} =$ _____ |
| 5) $\frac{6}{36} =$ _____  | 10) $\frac{54}{60} =$ _____ | 15) $\frac{12}{30} =$ _____ | 20) $\frac{4}{16} =$ _____  |

**Multiplying fractions by whole numbers**

- |                                  |                                 |
|----------------------------------|---------------------------------|
| 21) $\frac{6}{7}$ of 21 = _____  | 26) $\frac{4}{5}$ of 20 = _____ |
| 22) $\frac{5}{6}$ of 6 = _____   | 27) $\frac{1}{3}$ of 12 = _____ |
| 23) $\frac{9}{10}$ of 20 = _____ | 28) $\frac{4}{9}$ of 45 = _____ |
| 24) $\frac{2}{6}$ of 30 = _____  | 29) $\frac{4}{8}$ of 16 = _____ |
| 25) $\frac{3}{4}$ of 24 = _____  | 30) $\frac{2}{8}$ of 64 = _____ |

**Multiplying whole numbers by fractions**

- |                                      |                                     |
|--------------------------------------|-------------------------------------|
| 31) $28 \times \frac{1}{7} =$ _____  | 36) $24 \times \frac{1}{4} =$ _____ |
| 32) $5 \times \frac{2}{5} =$ _____   | 37) $28 \times \frac{3}{7} =$ _____ |
| 33) $16 \times \frac{1}{2} =$ _____  | 38) $81 \times \frac{2}{9} =$ _____ |
| 34) $40 \times \frac{5}{8} =$ _____  | 39) $45 \times \frac{3}{5} =$ _____ |
| 35) $20 \times \frac{6}{10} =$ _____ | 40) $10 \times \frac{1}{2} =$ _____ |

**Revision**

- |                     |                     |                       |                      |
|---------------------|---------------------|-----------------------|----------------------|
| 41) $4 + 6 =$ _____ | 46) $6 + 4 =$ _____ | 51) $17 - 8 =$ _____  | 56) $11 - 5 =$ _____ |
| 42) $5 + 3 =$ _____ | 47) $5 + 7 =$ _____ | 52) $9 - 5 =$ _____   | 57) $13 - 8 =$ _____ |
| 43) $5 + 6 =$ _____ | 48) $8 + 5 =$ _____ | 53) $6 - 4 =$ _____   | 58) $13 - 7 =$ _____ |
| 44) $7 + 6 =$ _____ | 49) $9 + 7 =$ _____ | 54) $20 - 10 =$ _____ | 59) $19 - 9 =$ _____ |
| 45) $8 + 7 =$ _____ | 50) $6 + 8 =$ _____ | 55) $10 - 8 =$ _____  | 60) $4 - 2 =$ _____  |

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x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Comparing Fractions:**

When denominators are the same it is easy, the numerator tells you which fraction is larger:

$$\frac{3}{4} > \frac{2}{4}$$

When the denominators are different, the easiest way to compare them is to find an equivalent fraction that make the denominators the same:

$$\frac{3}{4} \square \frac{7}{8}$$

$$\frac{6}{8} < \frac{7}{8}$$

Sometimes both fractions need changing:

$$\frac{3}{4} \square \frac{5}{6}$$

$$\frac{9}{12} < \frac{10}{12}$$

**Insert <, > or =**

1)  $\frac{1}{4}$   $\square$   $\frac{3}{4}$

6)  $\frac{2}{4}$   $\square$   $\frac{1}{4}$

11)  $\frac{3}{9}$   $\square$   $\frac{1}{3}$

16)  $\frac{3}{4}$   $\square$   $\frac{4}{6}$

2)  $\frac{5}{8}$   $\square$   $\frac{5}{6}$

7)  $\frac{6}{8}$   $\square$   $\frac{3}{4}$

12)  $\frac{4}{6}$   $\square$   $\frac{2}{3}$

17)  $\frac{3}{4}$   $\square$   $\frac{9}{12}$

3)  $\frac{1}{2}$   $\square$   $\frac{5}{8}$

8)  $\frac{2}{4}$   $\square$   $\frac{2}{8}$

13)  $\frac{1}{3}$   $\square$   $\frac{3}{6}$

18)  $\frac{2}{4}$   $\square$   $\frac{2}{5}$

4)  $\frac{2}{4}$   $\square$   $\frac{1}{2}$

9)  $\frac{5}{8}$   $\square$   $\frac{3}{4}$

14)  $\frac{1}{6}$   $\square$   $\frac{3}{12}$

19)  $\frac{2}{3}$   $\square$   $\frac{3}{4}$

5)  $\frac{3}{8}$   $\square$   $\frac{2}{4}$

10)  $\frac{2}{4}$   $\square$   $\frac{4}{8}$

15)  $\frac{1}{4}$   $\square$   $\frac{2}{3}$

20)  $\frac{5}{6}$   $\square$   $\frac{4}{6}$

**Simplify these fractions, show as a mixed number**

21)  $\frac{24}{10} =$  \_\_\_\_\_

25)  $\frac{36}{16} =$  \_\_\_\_\_

29)  $\frac{42}{36} =$  \_\_\_\_\_

22)  $\frac{10}{4} =$  \_\_\_\_\_

26)  $\frac{24}{16} =$  \_\_\_\_\_

30)  $\frac{32}{24} =$  \_\_\_\_\_

23)  $\frac{14}{6} =$  \_\_\_\_\_

27)  $\frac{36}{30} =$  \_\_\_\_\_

31)  $\frac{25}{15} =$  \_\_\_\_\_

24)  $\frac{18}{15} =$  \_\_\_\_\_

28)  $\frac{8}{6} =$  \_\_\_\_\_

32)  $\frac{21}{9} =$  \_\_\_\_\_

**Multiplying fractions by whole numbers**

33)  $\frac{4}{8}$  of 8 = \_\_\_\_\_

37)  $\frac{4}{8}$  of 16 = \_\_\_\_\_

34)  $\frac{7}{9}$  of 36 = \_\_\_\_\_

38)  $\frac{2}{5}$  of 40 = \_\_\_\_\_

35)  $\frac{2}{7}$  of 42 = \_\_\_\_\_

39)  $\frac{5}{8}$  of 16 = \_\_\_\_\_

36)  $\frac{1}{3}$  of 27 = \_\_\_\_\_

40)  $\frac{3}{8}$  of 48 = \_\_\_\_\_

**Multiplying whole numbers by fractions**

41)  $12 \times \frac{2}{3} =$  \_\_\_\_\_

45)  $48 \times \frac{3}{6} =$  \_\_\_\_\_

42)  $40 \times \frac{7}{10} =$  \_\_\_\_\_

46)  $36 \times \frac{2}{9} =$  \_\_\_\_\_

43)  $18 \times \frac{2}{9} =$  \_\_\_\_\_

47)  $12 \times \frac{2}{6} =$  \_\_\_\_\_

44)  $14 \times \frac{4}{7} =$  \_\_\_\_\_

48)  $30 \times \frac{2}{3} =$  \_\_\_\_\_

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x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Add the fractions**

1)  $\frac{4}{5} + \frac{3}{5} =$  \_\_\_\_\_

2)  $\frac{2}{3} + \frac{1}{3} =$  \_\_\_\_\_

3)  $\frac{3}{6} + \frac{4}{6} =$  \_\_\_\_\_

4)  $\frac{6}{9} + \frac{5}{9} =$  \_\_\_\_\_

5)  $\frac{2}{3} + \frac{2}{3} =$  \_\_\_\_\_

**Add the fractions. Change the improper fractions to mixed numbers and simplify.**

11)  $\frac{4}{6} + \frac{2}{6} =$

13)  $\frac{2}{3} + \frac{2}{3} =$

15)  $\frac{9}{12} + \frac{10}{12} =$

12)  $\frac{2}{4} + \frac{3}{4} =$

14)  $\frac{11}{12} + \frac{9}{12} =$

16)  $\frac{4}{10} + \frac{7}{10} =$

**Subtract the fractions (change to improper fractions where necessary)**

6)  $1\frac{2}{8} - \frac{3}{8} =$  \_\_\_\_\_

7)  $1\frac{2}{6} - \frac{4}{6} =$  \_\_\_\_\_

8)  $1\frac{2}{10} - \frac{5}{10} =$  \_\_\_\_\_

9)  $1\frac{4}{10} - \frac{6}{10} =$  \_\_\_\_\_

10)  $1\frac{1}{3} - \frac{2}{3} =$  \_\_\_\_\_

**Subtract the fractions (change to improper fractions where necessary)**

17)  $1\frac{1}{3} - \frac{2}{3} =$

19)  $1\frac{2}{4} - \frac{3}{4} =$

21)  $1\frac{2}{12} - \frac{4}{12} =$

18)  $1\frac{2}{4} - \frac{3}{4} =$

20)  $1\frac{4}{10} - \frac{7}{10} =$

22)  $1\frac{3}{5} - \frac{4}{5} =$

**Equivalent fractions**

23)  $\frac{3}{6} = \frac{\quad}{36}$

27)  $\frac{1}{\quad} = \frac{5}{15}$

31)  $\frac{\quad}{6} = \frac{9}{54}$

35)  $\frac{\quad}{4} = \frac{9}{12}$

24)  $\frac{4}{\quad} = \frac{40}{50}$

28)  $\frac{1}{2} = \frac{7}{\quad}$

32)  $\frac{6}{8} = \frac{\quad}{40}$

36)  $\frac{\quad}{4} = \frac{12}{16}$

25)  $\frac{1}{\quad} = \frac{4}{8}$

29)  $\frac{3}{\quad} = \frac{9}{12}$

33)  $\frac{1}{2} = \frac{9}{\quad}$

37)  $\frac{4}{8} = \frac{\quad}{40}$

26)  $\frac{2}{6} = \frac{\quad}{12}$

30)  $\frac{6}{8} = \frac{24}{\quad}$

34)  $\frac{5}{6} = \frac{\quad}{54}$

38)  $\frac{\quad}{3} = \frac{4}{6}$

This worksheet is part of the Professor Pete's Classroom eBook "Bring It On! Fractions Worksheets". The recommended teaching sequence is shown in the bar at the top of this sheet.

## Homework

## Adding and Subtracting Mixed Numbers: 7 HW



x	equivalent	compare	<b>+/- mixed</b>	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Add the fractions. Regroup where necessary. Simplify where possible.**

$$\begin{array}{r} 1) \quad 2\frac{2}{3} \\ + \quad 4\frac{1}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 3) \quad 2\frac{3}{5} \\ + \quad 4\frac{3}{5} \\ \hline \end{array}$$

$$\begin{array}{r} 5) \quad 6\frac{8}{10} \\ + \quad 1\frac{9}{10} \\ \hline \end{array}$$

$$\begin{array}{r} 7) \quad 1\frac{1}{12} \\ + \quad 4\frac{1}{12} \\ \hline \end{array}$$

$$\begin{array}{r} 2) \quad 3\frac{2}{9} \\ + \quad 5\frac{2}{9} \\ \hline \end{array}$$

$$\begin{array}{r} 4) \quad 3\frac{2}{3} \\ + \quad 2\frac{2}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 6) \quad 2\frac{4}{6} \\ + \quad 2\frac{5}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 8) \quad 1\frac{1}{4} \\ + \quad 3\frac{3}{4} \\ \hline \end{array}$$

**Subtract the fractions. Regroup where necessary and simplify.**

$$\begin{array}{r} 9) \quad 8\frac{1}{6} \\ - \quad 5\frac{5}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 11) \quad 7\frac{4}{6} \\ - \quad 1\frac{5}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 13) \quad 9\frac{2}{6} \\ - \quad 3\frac{4}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 15) \quad 6\frac{2}{6} \\ - \quad 6\frac{1}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 10) \quad 8\frac{1}{3} \\ - \quad 5\frac{2}{3} \\ \hline \end{array}$$

$$\begin{array}{r} 12) \quad 7\frac{5}{6} \\ - \quad 7\frac{4}{6} \\ \hline \end{array}$$

$$\begin{array}{r} 14) \quad 8\frac{2}{4} \\ - \quad 3\frac{3}{4} \\ \hline \end{array}$$

$$\begin{array}{r} 16) \quad 8\frac{8}{10} \\ - \quad 4\frac{9}{10} \\ \hline \end{array}$$

**Multiplying fractions by whole numbers**

$$17) \quad \frac{1}{7} \text{ of } 42 = \underline{\hspace{2cm}} \quad 21) \quad \frac{2}{4} \text{ of } 32 = \underline{\hspace{2cm}}$$

$$18) \quad \frac{2}{5} \text{ of } 15 = \underline{\hspace{2cm}} \quad 22) \quad \frac{3}{9} \text{ of } 9 = \underline{\hspace{2cm}}$$

$$19) \quad \frac{2}{4} \text{ of } 36 = \underline{\hspace{2cm}} \quad 23) \quad \frac{2}{4} \text{ of } 32 = \underline{\hspace{2cm}}$$

$$20) \quad \frac{6}{8} \text{ of } 40 = \underline{\hspace{2cm}} \quad 24) \quad \frac{2}{3} \text{ of } 15 = \underline{\hspace{2cm}}$$

**Multiplying whole numbers by fractions**

$$25) \quad 6 \times \frac{2}{3} = \underline{\hspace{2cm}} \quad 29) \quad 16 \times \frac{1}{8} = \underline{\hspace{2cm}}$$

$$26) \quad 10 \times \frac{1}{2} = \underline{\hspace{2cm}} \quad 30) \quad 10 \times \frac{2}{10} = \underline{\hspace{2cm}}$$

$$27) \quad 40 \times \frac{9}{10} = \underline{\hspace{2cm}} \quad 31) \quad 16 \times \frac{1}{2} = \underline{\hspace{2cm}}$$

$$28) \quad 30 \times \frac{2}{3} = \underline{\hspace{2cm}} \quad 32) \quad 36 \times \frac{4}{6} = \underline{\hspace{2cm}}$$

**Insert <, > or =**

$$33) \quad 1\frac{1}{3} \underline{\hspace{0.5cm}} \frac{8}{9}$$

$$35) \quad 1\frac{3}{12} \underline{\hspace{0.5cm}} 1\frac{6}{12}$$

$$37) \quad 2\frac{1}{6} \underline{\hspace{0.5cm}} \frac{14}{6}$$

$$39) \quad \frac{2}{3} \underline{\hspace{0.5cm}} \frac{2}{5}$$

$$34) \quad 3\frac{1}{3} \underline{\hspace{0.5cm}} \frac{10}{3}$$

$$36) \quad \frac{5}{9} \underline{\hspace{0.5cm}} \frac{8}{6}$$

$$38) \quad 2\frac{3}{5} \underline{\hspace{0.5cm}} \frac{12}{5}$$

$$40) \quad 4\frac{4}{5} \underline{\hspace{0.5cm}} \frac{24}{5}$$

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x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Converting Decimal Fractions to Common Fractions or Mixed Numbers:**

It is important to look at the places shown by each decimal. If only the tenths place is shown then use 10 as the denominator; if hundredths, then use 100 as the denominator.

0.4 is 4 tenths  $0.4 = \frac{4}{10}$

0.36 is 36 hundredths  $0.36 = \frac{36}{100}$

2.5 is 2 and 5 tenths  $2.5 = 2\frac{5}{10}$

6.78 is 6 and 78 hundredths  $6.78 = 6\frac{78}{100}$

**Convert decimals to common fractions**

- |                 |                  |
|-----------------|------------------|
| 1) 0.19 = _____ | 6) 0.59 = _____  |
| 2) 0.8 = _____  | 7) 0.16 = _____  |
| 3) 0.9 = _____  | 8) 0.3 = _____   |
| 4) 0.43 = _____ | 9) 0.5 = _____   |
| 5) 0.33 = _____ | 10) 0.82 = _____ |

**Convert decimals to mixed numbers**

- |                  |                  |
|------------------|------------------|
| 11) 3.6 = _____  | 16) 5.7 = _____  |
| 12) 0.7 = _____  | 17) 7.03 = _____ |
| 13) 2.68 = _____ | 18) 5.14 = _____ |
| 14) 5.6 = _____  | 19) 1.69 = _____ |
| 15) 1.9 = _____  | 20) 0.49 = _____ |

**Converting Common Fractions or Mixed Numbers to Decimal Fractions:**

It is important to look at the denominator. If it is a 10 or 100, think of the places that are shown by that denominator.

$\frac{4}{10}$  is 4 tenths so as a decimal it is 0.4

$\frac{36}{100}$  is 36 hundredths so as a decimal it is 0.36

$3\frac{7}{10}$  is 3 and 7 tenths so as a decimal it is 3.7

$8\frac{54}{100}$  is 8 and 54 hundredths so as a decimal it is 8.54

**Convert common fractions to decimals**

- |                              |                              |
|------------------------------|------------------------------|
| 21) $\frac{11}{100} =$ _____ | 26) $\frac{2}{10} =$ _____   |
| 22) $\frac{1}{10} =$ _____   | 27) $\frac{3}{100} =$ _____  |
| 23) $\frac{33}{100} =$ _____ | 28) $\frac{47}{100} =$ _____ |
| 24) $\frac{5}{10} =$ _____   | 29) $\frac{39}{100} =$ _____ |
| 25) $\frac{42}{100} =$ _____ | 30) $\frac{8}{10} =$ _____   |

**Convert mixed numbers to decimals**

- |                               |                               |
|-------------------------------|-------------------------------|
| 31) $6\frac{41}{100} =$ _____ | 36) $6\frac{8}{10} =$ _____   |
| 32) $4\frac{20}{100} =$ _____ | 37) $2\frac{26}{100} =$ _____ |
| 33) $1\frac{32}{100} =$ _____ | 38) $3\frac{40}{100} =$ _____ |
| 34) $7\frac{3}{10} =$ _____   | 39) $5\frac{31}{100} =$ _____ |
| 35) $\frac{9}{10} =$ _____    | 40) $3\frac{7}{10} =$ _____   |

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x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Converting Equivalent Common Fractions to Decimal Fractions:**

When the denominator is not a 10 or 100, then the fraction needs to be changed to its equivalent denominator that is 10 or 100.

$$\cancel{\frac{2}{5}} \frac{4}{10} \text{ is 4 tenths so as a decimal it is } 0.4$$

$$\cancel{\frac{5}{20}} \frac{25}{100} \text{ is 25 hundredths so as a decimal it is } 0.25$$

$$3 \cancel{\frac{1}{2}} \frac{5}{10} \text{ is 3 and 5 tenths so as a decimal it is } 3.5$$

$$8 \cancel{\frac{6}{25}} \frac{24}{100} \text{ is 8 and 24 hundredths so as a decimal it is } 8.24$$

**Convert common fractions to decimals**

- |                      |                       |
|----------------------|-----------------------|
| 1) $\frac{17}{50} =$ | 11) $\frac{22}{50} =$ |
| 2) $\frac{9}{25} =$  | 12) $\frac{1}{2} =$   |
| 3) $\frac{2}{5} =$   | 13) $\frac{1}{5} =$   |
| 4) $\frac{1}{50} =$  | 14) $\frac{18}{50} =$ |
| 5) $\frac{22}{25} =$ | 15) $\frac{8}{25} =$  |
| 6) $\frac{3}{5} =$   | 16) $\frac{23}{25} =$ |
| 7) $\frac{7}{20} =$  | 17) $\frac{11}{20} =$ |
| 8) $\frac{11}{50} =$ | 18) $\frac{2}{20} =$  |
| 9) $\frac{15}{50} =$ | 19) $\frac{9}{20} =$  |
| 10) $\frac{6}{25} =$ | 20) $\frac{9}{25} =$  |

**Convert mixed numbers to decimals**

- |                         |                         |
|-------------------------|-------------------------|
| 21) $1 \frac{4}{5} =$   | 31) $8 \frac{10}{25} =$ |
| 22) $8 \frac{1}{2} =$   | 32) $7 \frac{5}{20} =$  |
| 23) $1 \frac{2}{5} =$   | 33) $3 \frac{1}{5} =$   |
| 24) $4 \frac{2}{20} =$  | 34) $8 \frac{3}{5} =$   |
| 25) $5 \frac{32}{50} =$ | 35) $7 \frac{7}{25} =$  |
| 26) $1 \frac{14}{50} =$ | 36) $6 \frac{6}{20} =$  |
| 27) $9 \frac{13}{50} =$ | 37) $1 \frac{11}{20} =$ |
| 28) $5 \frac{7}{20} =$  | 38) $1 \frac{16}{50} =$ |
| 29) $7 \frac{10}{25} =$ | 39) $7 \frac{11}{25} =$ |
| 30) $7 \frac{9}{20} =$  | 40) $3 \frac{27}{50} =$ |

**Multiply fractions by whole numbers**

- |                            |                            |
|----------------------------|----------------------------|
| 41) $\frac{5}{6}$ of 36 =  | 45) $\frac{2}{6}$ of 36 =  |
| 42) $\frac{3}{4}$ of 16 =  | 46) $\frac{9}{10}$ of 40 = |
| 43) $\frac{6}{10}$ of 10 = | 47) $\frac{5}{8}$ of 48 =  |
| 44) $\frac{5}{10}$ of 40 = | 48) $\frac{4}{9}$ of 18 =  |

**Multiply whole numbers by fractions**

- |                               |                                |
|-------------------------------|--------------------------------|
| 49) $36 \times \frac{2}{9} =$ | 53) $10 \times \frac{4}{10} =$ |
| 50) $40 \times \frac{2}{8} =$ | 54) $30 \times \frac{4}{6} =$  |
| 51) $42 \times \frac{4}{6} =$ | 55) $30 \times \frac{7}{10} =$ |
| 52) $18 \times \frac{1}{2} =$ | 56) $15 \times \frac{2}{3} =$  |

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x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Simplify these fractions**

- 1)  $\frac{2}{8} =$  \_\_\_\_\_ 3)  $\frac{18}{24} =$  \_\_\_\_\_ 5)  $\frac{22}{6} =$  \_\_\_\_\_ 7)  $\frac{35}{25} =$  \_\_\_\_\_
- 2)  $\frac{45}{50} =$  \_\_\_\_\_ 4)  $\frac{9}{24} =$  \_\_\_\_\_ 6)  $\frac{6}{18} =$  \_\_\_\_\_ 8)  $\frac{4}{32} =$  \_\_\_\_\_

**Convert common fractions to decimals**

- 9)  $\frac{1}{2} =$  \_\_\_\_\_ 14)  $\frac{3}{5} =$  \_\_\_\_\_
- 10)  $\frac{10}{25} =$  \_\_\_\_\_ 15)  $\frac{4}{5} =$  \_\_\_\_\_
- 11)  $\frac{6}{25} =$  \_\_\_\_\_ 16)  $\frac{11}{25} =$  \_\_\_\_\_
- 12)  $\frac{1}{5} =$  \_\_\_\_\_ 17)  $\frac{44}{50} =$  \_\_\_\_\_
- 13)  $\frac{4}{25} =$  \_\_\_\_\_ 18)  $\frac{13}{50} =$  \_\_\_\_\_

**Convert mixed numbers to decimals**

- 19)  $1\frac{1}{2} =$  \_\_\_\_\_ 24)  $9\frac{5}{25} =$  \_\_\_\_\_
- 20)  $2\frac{29}{50} =$  \_\_\_\_\_ 25)  $6\frac{2}{25} =$  \_\_\_\_\_
- 21)  $7\frac{7}{25} =$  \_\_\_\_\_ 26)  $3\frac{3}{5} =$  \_\_\_\_\_
- 22)  $8\frac{5}{25} =$  \_\_\_\_\_ 27)  $2\frac{9}{25} =$  \_\_\_\_\_
- 23)  $4\frac{2}{20} =$  \_\_\_\_\_ 28)  $1\frac{7}{20} =$  \_\_\_\_\_

**Add the fractions**

- 29)  $4\frac{5}{8} + 1\frac{3}{8} =$  \_\_\_\_\_
- 30)  $4\frac{3}{10} + 2\frac{3}{10} =$  \_\_\_\_\_
- 31)  $5\frac{8}{9} + 5\frac{1}{9} =$  \_\_\_\_\_
- 32)  $6\frac{1}{9} + 5\frac{6}{9} =$  \_\_\_\_\_

**Subtract the fractions**

- 33)  $9\frac{1}{4} - 7\frac{3}{4} =$  \_\_\_\_\_
- 34)  $6\frac{2}{6} - 1\frac{3}{6} =$  \_\_\_\_\_
- 35)  $5\frac{10}{12} - 3\frac{9}{12} =$  \_\_\_\_\_
- 36)  $5\frac{2}{6} - 3\frac{4}{6} =$  \_\_\_\_\_

**Add the fractions**

- 37)  $8\frac{4}{10} + 1\frac{9}{10} =$  \_\_\_\_\_
- 38)  $1\frac{7}{9} + 4\frac{1}{9} =$  \_\_\_\_\_

**Subtract the fractions**

- 39)  $1\frac{2}{5} - \frac{3}{5} =$  \_\_\_\_\_
- 40)  $3\frac{2}{6} - \frac{5}{6} =$  \_\_\_\_\_

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# Answer Keys

## **Answer Keys**

Answer Keys are provided for all worksheets in this eBook. Each Answer Key is identified by the title in the header of the page, which is identical to the relevant worksheet.

## **Suggested Uses:**

1. Put the complete set of answer keys in a folder for students to take when marking their own work.
2. Display the relevant answer key on a data projector, with or without an interactive whiteboard, to display the answers to students as they mark each other's responses.

Name: \_\_\_\_\_

Score: \_\_\_\_\_

Multiplying by Fractions: 1 [A]



<input type="checkbox"/> x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Multiplying Fractions by Whole Numbers:**

$$\frac{3}{4} \text{ of } 12 = 3$$

1. Divide the whole number by the denominator:

$$\frac{1}{4} \times 12 = 12 \div 4 = 3$$

2. If one quarter of 12 = 3, then three quarters = 9 :

$$\frac{3}{4} \times 12 = (12 \div 4) \times 3 = 3 \times 3 = 9$$

**Multiplying unit fractions by whole numbers**

- |                                   |                                    |
|-----------------------------------|------------------------------------|
| 1) $\frac{1}{9}$ of 45 = <u>5</u> | 6) $\frac{1}{10}$ of 10 = <u>1</u> |
| 2) $\frac{1}{8}$ of 48 = <u>6</u> | 7) $\frac{1}{4}$ of 40 = <u>10</u> |
| 3) $\frac{1}{2}$ of 8 = <u>4</u>  | 8) $\frac{1}{4}$ of 32 = <u>8</u>  |
| 4) $\frac{1}{9}$ of 27 = <u>3</u> | 9) $\frac{1}{9}$ of 18 = <u>2</u>  |
| 5) $\frac{1}{5}$ of 15 = <u>3</u> | 10) $\frac{1}{7}$ of 49 = <u>7</u> |

**Multiplying whole numbers by unit fractions**

- |   |  |
|---|--|
| 31) $28 \times \frac{1}{7} = \underline{4}$ | 36) $42 \times \frac{1}{6} = \underline{7}$  |
| 32) $5 \times \frac{1}{5} = \underline{1}$  | 37) $40 \times \frac{1}{4} = \underline{10}$ |
| 33) $16 \times \frac{1}{4} = \underline{4}$ | 38) $21 \times \frac{1}{3} = \underline{7}$  |
| 34) $42 \times \frac{1}{7} = \underline{6}$ | 39) $24 \times \frac{1}{3} = \underline{8}$  |
| 35) $48 \times \frac{1}{8} = \underline{6}$ | 40) $36 \times \frac{1}{9} = \underline{4}$  |

**Multiplying fractions by whole numbers**

- |                                     |                                      |
|-------------------------------------|--------------------------------------|
| 11) $\frac{1}{6}$ of 30 = <u>5</u>  | 21) $\frac{1}{5}$ of 25 = <u>5</u>   |
| 12) $\frac{2}{6}$ of 30 = <u>10</u> | 22) $\frac{3}{5}$ of 25 = <u>15</u>  |
| 13) $\frac{1}{4}$ of 36 = <u>9</u>  | 23) $\frac{1}{8}$ of 16 = <u>2</u>   |
| 14) $\frac{3}{4}$ of 36 = <u>27</u> | 24) $\frac{5}{8}$ of 16 = <u>10</u>  |
| 15) $\frac{1}{3}$ of 24 = <u>8</u>  | 25) $\frac{1}{6}$ of 24 = <u>4</u>   |
| 16) $\frac{2}{3}$ of 24 = <u>16</u> | 26) $\frac{4}{6}$ of 24 = <u>16</u>  |
| 17) $\frac{1}{5}$ of 20 = <u>4</u>  | 27) $\frac{1}{5}$ of 15 = <u>3</u>   |
| 18) $\frac{3}{5}$ of 20 = <u>12</u> | 28) $\frac{4}{5}$ of 15 = <u>12</u>  |
| 19) $\frac{1}{3}$ of 12 = <u>4</u>  | 29) $\frac{1}{10}$ of 90 = <u>9</u>  |
| 20) $\frac{2}{3}$ of 12 = <u>8</u>  | 30) $\frac{7}{10}$ of 90 = <u>63</u> |

**Multiplying whole numbers by fractions**

- |   |  |
|---|--|
| 41) $36 \times \frac{1}{4} = \underline{9}$   | 51) $30 \times \frac{1}{6} = \underline{5}$  |
| 42) $36 \times \frac{3}{4} = \underline{27}$  | 52) $30 \times \frac{2}{6} = \underline{10}$ |
| 43) $18 \times \frac{1}{9} = \underline{2}$   | 53) $54 \times \frac{1}{6} = \underline{9}$  |
| 44) $18 \times \frac{8}{9} = \underline{16}$  | 54) $54 \times \frac{3}{6} = \underline{27}$ |
| 45) $40 \times \frac{1}{10} = \underline{4}$  | 55) $63 \times \frac{1}{9} = \underline{7}$  |
| 46) $40 \times \frac{8}{10} = \underline{32}$ | 56) $63 \times \frac{4}{9} = \underline{28}$ |
| 47) $18 \times \frac{1}{6} = \underline{3}$   | 57) $25 \times \frac{1}{5} = \underline{5}$  |
| 48) $18 \times \frac{4}{6} = \underline{12}$  | 58) $25 \times \frac{4}{5} = \underline{20}$ |
| 49) $9 \times \frac{1}{9} = \underline{1}$    | 59) $32 \times \frac{1}{4} = \underline{8}$  |
| 50) $9 \times \frac{5}{9} = \underline{5}$    | 60) $32 \times \frac{3}{4} = \underline{24}$ |

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Multiplying by Fractions: 1 [ B ]



<input checked="" type="checkbox"/> x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Multiplying unit fractions by whole numbers**

- 1)  $\frac{1}{4}$  of 24 = 6      6)  $\frac{1}{4}$  of 16 = 4  
 2)  $\frac{1}{9}$  of 27 = 3      7)  $\frac{1}{10}$  of 30 = 3  
 3)  $\frac{1}{4}$  of 16 = 4      8)  $\frac{1}{5}$  of 10 = 2  
 4)  $\frac{1}{3}$  of 18 = 6      9)  $\frac{1}{6}$  of 24 = 4  
 5)  $\frac{1}{7}$  of 42 = 6      10)  $\frac{1}{3}$  of 24 = 8

**Multiplying whole numbers by unit fractions**

- 31)  $20 \times \frac{1}{10} = \underline{2}$       36)  $18 \times \frac{1}{2} = \underline{9}$   
 32)  $30 \times \frac{1}{3} = \underline{10}$       37)  $30 \times \frac{1}{6} = \underline{5}$   
 33)  $18 \times \frac{1}{2} = \underline{9}$       38)  $72 \times \frac{1}{9} = \underline{8}$   
 34)  $18 \times \frac{1}{3} = \underline{6}$       39)  $27 \times \frac{1}{9} = \underline{3}$   
 35)  $48 \times \frac{1}{6} = \underline{8}$       40)  $24 \times \frac{1}{3} = \underline{8}$

**Multiplying fractions by whole numbers**

- 11)  $\frac{1}{9}$  of 45 = 5      21)  $\frac{1}{7}$  of 49 = 7  
 12)  $\frac{5}{9}$  of 45 = 25      22)  $\frac{5}{7}$  of 49 = 35  
 13)  $\frac{1}{4}$  of 16 = 4      23)  $\frac{1}{6}$  of 42 = 7  
 14)  $\frac{3}{4}$  of 16 = 12      24)  $\frac{5}{6}$  of 42 = 35  
 15)  $\frac{1}{10}$  of 40 = 4      25)  $\frac{1}{4}$  of 24 = 6  
 16)  $\frac{8}{10}$  of 40 = 32      26)  $\frac{3}{4}$  of 24 = 18  
 17)  $\frac{1}{5}$  of 45 = 9      27)  $\frac{1}{9}$  of 72 = 8  
 18)  $\frac{3}{5}$  of 45 = 27      28)  $\frac{6}{9}$  of 72 = 48  
 19)  $\frac{1}{10}$  of 80 = 8      29)  $\frac{1}{6}$  of 30 = 5  
 20)  $\frac{6}{10}$  of 80 = 48      30)  $\frac{5}{6}$  of 30 = 25

**Multiplying whole numbers by fractions**

- 41)  $32 \times \frac{1}{8} = \underline{4}$       51)  $35 \times \frac{1}{5} = \underline{7}$   
 42)  $32 \times \frac{5}{8} = \underline{20}$       52)  $35 \times \frac{4}{5} = \underline{28}$   
 43)  $36 \times \frac{1}{9} = \underline{4}$       53)  $63 \times \frac{1}{7} = \underline{9}$   
 44)  $36 \times \frac{6}{9} = \underline{24}$       54)  $63 \times \frac{6}{7} = \underline{54}$   
 45)  $42 \times \frac{1}{7} = \underline{6}$       55)  $81 \times \frac{1}{9} = \underline{9}$   
 46)  $42 \times \frac{5}{7} = \underline{30}$       56)  $81 \times \frac{8}{9} = \underline{72}$   
 47)  $27 \times \frac{1}{3} = \underline{9}$       57)  $40 \times \frac{1}{5} = \underline{8}$   
 48)  $27 \times \frac{2}{3} = \underline{18}$       58)  $40 \times \frac{4}{5} = \underline{32}$   
 49)  $32 \times \frac{1}{8} = \underline{4}$       59)  $63 \times \frac{1}{7} = \underline{9}$   
 50)  $32 \times \frac{4}{8} = \underline{16}$       60)  $63 \times \frac{5}{7} = \underline{45}$

**Revision**

- 61)  $9 + 9 = \underline{18}$       65)  $7 + 6 = \underline{13}$       69)  $18 - 9 = \underline{9}$       73)  $20 - 10 = \underline{10}$   
 62)  $8 + 8 = \underline{16}$       66)  $5 + 9 = \underline{14}$       70)  $19 - 10 = \underline{9}$       74)  $9 - 3 = \underline{6}$   
 63)  $4 + 4 = \underline{8}$       67)  $4 + 9 = \underline{13}$       71)  $16 - 8 = \underline{8}$       75)  $4 - 2 = \underline{2}$   
 64)  $4 + 5 = \underline{9}$       68)  $9 + 4 = \underline{13}$       72)  $12 - 7 = \underline{5}$       76)  $14 - 8 = \underline{6}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Multiplying by Fractions: 1 [ C ]



<input checked="" type="checkbox"/> x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Multiplying unit fractions by whole numbers**

- 1)  $\frac{1}{4}$  of 20 = 5      6)  $\frac{1}{4}$  of 36 = 9  
 2)  $\frac{1}{9}$  of 81 = 9      7)  $\frac{1}{3}$  of 30 = 10  
 3)  $\frac{1}{2}$  of 10 = 5      8)  $\frac{1}{6}$  of 30 = 5  
 4)  $\frac{1}{9}$  of 72 = 8      9)  $\frac{1}{7}$  of 49 = 7  
 5)  $\frac{1}{8}$  of 72 = 9      10)  $\frac{1}{10}$  of 40 = 4

**Multiplying whole numbers by unit fractions**

- 31)  $30 \times \frac{1}{10} = \underline{3}$       36)  $20 \times \frac{1}{5} = \underline{4}$   
 32)  $36 \times \frac{1}{4} = \underline{9}$       37)  $24 \times \frac{1}{4} = \underline{6}$   
 33)  $18 \times \frac{1}{6} = \underline{3}$       38)  $40 \times \frac{1}{5} = \underline{8}$   
 34)  $40 \times \frac{1}{10} = \underline{4}$       39)  $10 \times \frac{1}{10} = \underline{1}$   
 35)  $56 \times \frac{1}{7} = \underline{8}$       40)  $48 \times \frac{1}{8} = \underline{6}$

**Multiplying fractions by whole numbers**

- 11)  $\frac{2}{3}$  of 15 = 10      21)  $\frac{1}{2}$  of 20 = 10  
 12)  $\frac{5}{7}$  of 49 = 35      22)  $\frac{3}{4}$  of 20 = 15  
 13)  $\frac{2}{4}$  of 28 = 14      23)  $\frac{2}{4}$  of 24 = 12  
 14)  $\frac{8}{10}$  of 30 = 24      24)  $\frac{4}{10}$  of 10 = 4  
 15)  $\frac{1}{3}$  of 27 = 9      25)  $\frac{1}{2}$  of 24 = 12  
 16)  $\frac{1}{5}$  of 5 = 1      26)  $\frac{2}{4}$  of 12 = 6  
 17)  $\frac{3}{5}$  of 30 = 18      27)  $\frac{2}{9}$  of 9 = 2  
 18)  $\frac{7}{10}$  of 40 = 28      28)  $\frac{3}{4}$  of 40 = 30  
 19)  $\frac{1}{2}$  of 8 = 4      29)  $\frac{1}{7}$  of 49 = 7  
 20)  $\frac{1}{3}$  of 12 = 4      30)  $\frac{2}{7}$  of 42 = 12

**Multiplying whole numbers by fractions**

- 41)  $12 \times \frac{4}{6} = \underline{8}$       51)  $18 \times \frac{2}{6} = \underline{6}$   
 42)  $20 \times \frac{1}{2} = \underline{10}$       52)  $21 \times \frac{2}{7} = \underline{6}$   
 43)  $27 \times \frac{4}{9} = \underline{12}$       53)  $6 \times \frac{1}{2} = \underline{3}$   
 44)  $30 \times \frac{8}{10} = \underline{24}$       54)  $18 \times \frac{3}{9} = \underline{6}$   
 45)  $36 \times \frac{1}{6} = \underline{6}$       55)  $21 \times \frac{2}{7} = \underline{6}$   
 46)  $6 \times \frac{1}{2} = \underline{3}$       56)  $12 \times \frac{2}{6} = \underline{4}$   
 47)  $32 \times \frac{5}{8} = \underline{20}$       57)  $10 \times \frac{2}{10} = \underline{2}$   
 48)  $40 \times \frac{3}{4} = \underline{30}$       58)  $42 \times \frac{2}{6} = \underline{14}$   
 49)  $7 \times \frac{5}{7} = \underline{5}$       59)  $48 \times \frac{3}{8} = \underline{18}$   
 50)  $40 \times \frac{3}{10} = \underline{12}$       60)  $45 \times \frac{2}{5} = \underline{18}$

**Revision**

- 61)  $4 + 7 = \underline{11}$       65)  $4 + 6 = \underline{10}$       69)  $9 - 5 = \underline{4}$       73)  $17 - 9 = \underline{8}$   
 62)  $5 + 5 = \underline{10}$       66)  $9 + 4 = \underline{13}$       70)  $5 - 2 = \underline{3}$       74)  $16 - 8 = \underline{8}$   
 63)  $7 + 3 = \underline{10}$       67)  $4 + 4 = \underline{8}$       71)  $11 - 5 = \underline{6}$       75)  $11 - 7 = \underline{4}$   
 64)  $9 + 6 = \underline{15}$       68)  $9 + 5 = \underline{14}$       72)  $13 - 8 = \underline{5}$       76)  $12 - 2 = \underline{10}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Multiplying by Fractions: 1 [ D ]



<input checked="" type="checkbox"/> x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Multiplying unit fractions by whole numbers**

- 1)  $\frac{1}{2}$  of 18 = 9      6)  $\frac{1}{2}$  of 10 = 5  
 2)  $\frac{1}{3}$  of 21 = 7      7)  $\frac{1}{10}$  of 10 = 1  
 3)  $\frac{1}{4}$  of 36 = 9      8)  $\frac{1}{8}$  of 64 = 8  
 4)  $\frac{1}{7}$  of 49 = 7      9)  $\frac{1}{6}$  of 54 = 9  
 5)  $\frac{1}{6}$  of 30 = 5      10)  $\frac{1}{8}$  of 56 = 7

**Multiplying whole numbers by unit fractions**

- 31)  $5 \times \frac{1}{5} = \underline{1}$       36)  $35 \times \frac{1}{5} = \underline{7}$   
 32)  $81 \times \frac{1}{9} = \underline{9}$       37)  $18 \times \frac{1}{6} = \underline{3}$   
 33)  $28 \times \frac{1}{4} = \underline{7}$       38)  $72 \times \frac{1}{9} = \underline{8}$   
 34)  $18 \times \frac{1}{2} = \underline{9}$       39)  $42 \times \frac{1}{7} = \underline{6}$   
 35)  $49 \times \frac{1}{7} = \underline{7}$       40)  $63 \times \frac{1}{9} = \underline{7}$

**Multiplying fractions by whole numbers**

- 11)  $\frac{3}{8}$  of 16 = 6      21)  $\frac{4}{7}$  of 7 = 4  
 12)  $\frac{6}{10}$  of 10 = 6      22)  $\frac{1}{2}$  of 16 = 8  
 13)  $\frac{5}{6}$  of 24 = 20      23)  $\frac{5}{7}$  of 35 = 25  
 14)  $\frac{3}{9}$  of 18 = 6      24)  $\frac{3}{7}$  of 14 = 6  
 15)  $\frac{3}{10}$  of 40 = 12      25)  $\frac{1}{2}$  of 16 = 8  
 16)  $\frac{1}{3}$  of 21 = 7      26)  $\frac{8}{9}$  of 45 = 40  
 17)  $\frac{2}{3}$  of 18 = 12      27)  $\frac{6}{8}$  of 16 = 12  
 18)  $\frac{3}{5}$  of 20 = 12      28)  $\frac{4}{8}$  of 8 = 4  
 19)  $\frac{2}{8}$  of 32 = 8      29)  $\frac{4}{7}$  of 35 = 20  
 20)  $\frac{1}{5}$  of 35 = 7      30)  $\frac{4}{10}$  of 10 = 4

**Multiplying whole numbers by fractions**

- 41)  $9 \times \frac{2}{3} = \underline{6}$       51)  $9 \times \frac{4}{9} = \underline{4}$   
 42)  $12 \times \frac{1}{2} = \underline{6}$       52)  $42 \times \frac{3}{6} = \underline{21}$   
 43)  $10 \times \frac{2}{10} = \underline{2}$       53)  $32 \times \frac{3}{4} = \underline{24}$   
 44)  $20 \times \frac{6}{10} = \underline{12}$       54)  $15 \times \frac{1}{5} = \underline{3}$   
 45)  $15 \times \frac{3}{5} = \underline{9}$       55)  $9 \times \frac{2}{3} = \underline{6}$   
 46)  $40 \times \frac{6}{10} = \underline{24}$       56)  $32 \times \frac{2}{8} = \underline{8}$   
 47)  $48 \times \frac{5}{6} = \underline{40}$       57)  $27 \times \frac{1}{9} = \underline{3}$   
 48)  $40 \times \frac{7}{10} = \underline{28}$       58)  $10 \times \frac{1}{2} = \underline{5}$   
 49)  $18 \times \frac{1}{3} = \underline{6}$       59)  $35 \times \frac{3}{7} = \underline{15}$   
 50)  $5 \times \frac{2}{5} = \underline{2}$       60)  $30 \times \frac{9}{10} = \underline{27}$

**Revision**

- 61)  $8 + 2 = \underline{10}$       65)  $4 + 7 = \underline{11}$       69)  $12 - 4 = \underline{8}$       73)  $14 - 6 = \underline{8}$   
 62)  $9 + 7 = \underline{16}$       66)  $6 + 5 = \underline{11}$       70)  $16 - 10 = \underline{6}$       74)  $19 - 10 = \underline{9}$   
 63)  $4 + 5 = \underline{9}$       67)  $9 + 6 = \underline{15}$       71)  $13 - 8 = \underline{5}$       75)  $8 - 4 = \underline{4}$   
 64)  $5 + 9 = \underline{14}$       68)  $7 + 6 = \underline{13}$       72)  $11 - 2 = \underline{9}$       76)  $13 - 4 = \underline{9}$

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Name:

Score:

Improper and Mixed Numbers: 2 [A]

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CLASSROOM

x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Converting Mixed Numbers to Improper Fractions:**

- The denominator (bottom number) shows how many fractional parts are in one whole.
- Multiply that denominator by the whole number.
- Add that to the number of fractional parts (numerator).
- Together they tell you the numerator in the improper fraction.

$2\frac{3}{5}$  each whole has 5 fifths  
so 2 wholes are  $2 \times 5$  fifths or 10  
fifths then add in the 3 fifths

$$\frac{5}{5} + \frac{5}{5} + \frac{3}{5} = \frac{13}{5} \quad \text{or} \quad (2 \times \frac{5}{5}) + \frac{3}{5} = \frac{13}{5}$$

**Mixed numbers to improper fractions**

1) $1\frac{3}{4} = \frac{7}{4}$	6) $5\frac{5}{6} = \frac{35}{6}$	11) $3\frac{4}{8} = \frac{28}{8}$	16) $3\frac{2}{5} = \frac{17}{5}$
2) $3\frac{2}{6} = \frac{20}{6}$	7) $6\frac{1}{2} = \frac{13}{2}$	12) $1\frac{4}{7} = \frac{11}{7}$	17) $4\frac{1}{5} = \frac{21}{5}$
3) $4\frac{1}{3} = \frac{13}{3}$	8) $2\frac{2}{3} = \frac{8}{3}$	13) $6\frac{1}{4} = \frac{25}{4}$	18) $5\frac{1}{2} = \frac{11}{2}$
4) $1\frac{4}{5} = \frac{9}{5}$	9) $1\frac{2}{4} = \frac{6}{4}$	14) $2\frac{1}{5} = \frac{11}{5}$	19) $2\frac{3}{4} = \frac{11}{4}$
5) $2\frac{2}{4} = \frac{10}{4}$	10) $3\frac{2}{5} = \frac{17}{5}$	15) $4\frac{3}{4} = \frac{19}{4}$	20) $4\frac{2}{4} = \frac{18}{4}$

**Converting Improper Fractions to Mixed Numbers:**

- The denominator shows how many fractional parts are in one whole.
- Divide the numerator (top number) by the denominator.
- Write the whole number answer.
- Then write the remainder as the numerator above the denominator.

$\frac{11}{4}$   $11 \div 4 = 2$  remainder 3  
so the mixed number is

$$2\frac{3}{4}$$

Remember the fraction is in quarters so  
your remainder is a number of quarters.

**Improper fractions to mixed numbers**

21) $\frac{11}{4} = 2\frac{3}{4}$	26) $\frac{13}{5} = 2\frac{3}{5}$	31) $\frac{14}{3} = 4\frac{2}{3}$	36) $\frac{8}{3} = 2\frac{2}{3}$
22) $\frac{14}{3} = 4\frac{2}{3}$	27) $\frac{15}{4} = 3\frac{3}{4}$	32) $\frac{5}{2} = 2\frac{1}{2}$	37) $\frac{13}{4} = 3\frac{1}{4}$
23) $\frac{11}{5} = 2\frac{1}{5}$	28) $\frac{7}{3} = 2\frac{1}{3}$	33) $\frac{11}{2} = 5\frac{1}{2}$	38) $\frac{6}{4} = 1\frac{2}{4}$
24) $\frac{16}{5} = 3\frac{1}{5}$	29) $\frac{12}{5} = 2\frac{2}{5}$	34) $\frac{10}{4} = 2\frac{2}{4}$	39) $\frac{17}{5} = 3\frac{2}{5}$
25) $\frac{19}{5} = 3\frac{4}{5}$	30) $\frac{18}{4} = 4\frac{2}{4}$	35) $\frac{19}{4} = 4\frac{3}{4}$	40) $\frac{14}{6} = 2\frac{2}{6}$

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Name:

Score:

Improper and Mixed Numbers: 2 [ B ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Converting Mixed Numbers to Improper Fractions:**

- Sometimes there is only a whole number to be converted to an improper fraction.

$$2 = \frac{?}{3} \quad \text{each whole has 3 thirds so 2 wholes are } 2 \times 3 \text{ thirds or 6 thirds}$$

There are no extra thirds to add.

$$\frac{3}{3} + \frac{3}{3} = \frac{6}{3} \quad \text{or} \quad 2 \times \frac{3}{3} = \frac{6}{3}$$

**Mixed numbers to improper fractions**

- |                                   |                                    |                                    |                                    |
|-----------------------------------|------------------------------------|------------------------------------|------------------------------------|
| 1) $5 \frac{2}{6} = \frac{32}{6}$ | 6) $3 = \frac{15}{5}$              | 11) $3 \frac{2}{6} = \frac{20}{6}$ | 16) $3 \frac{2}{5} = \frac{17}{5}$ |
| 2) $4 = \frac{20}{5}$             | 7) $3 \frac{2}{5} = \frac{17}{5}$  | 12) $1 = \frac{4}{4}$              | 17) $4 \frac{4}{5} = \frac{24}{5}$ |
| 3) $2 \frac{3}{4} = \frac{11}{4}$ | 8) $2 = \frac{16}{8}$              | 13) $5 \frac{1}{3} = \frac{16}{3}$ | 18) $2 \frac{2}{4} = \frac{10}{4}$ |
| 4) $1 \frac{4}{5} = \frac{9}{5}$  | 9) $5 \frac{1}{2} = \frac{11}{2}$  | 14) $2 \frac{1}{5} = \frac{11}{5}$ | 19) $6 = \frac{18}{3}$             |
| 5) $4 \frac{2}{4} = \frac{18}{4}$ | 10) $1 \frac{4}{7} = \frac{11}{7}$ | 15) $4 \frac{3}{4} = \frac{19}{4}$ | 20) $1 \frac{3}{4} = \frac{7}{4}$  |

**Converting Improper Fractions to Mixed Numbers:**

- Sometimes when the numerator is divided by the denominator there are no remainders and so the answer is a whole number only.

$$\frac{12}{4} \quad 12 \div 4 = 3 \text{ with no remainder so the answer is } 3$$

**Improper fractions to mixed numbers**

- |                                    |                                    |                                    |                                    |
|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| 21) $\frac{15}{3} = 5$             | 26) $\frac{15}{4} = 3 \frac{3}{4}$ | 31) $\frac{12}{5} = 2 \frac{2}{5}$ | 36) $\frac{16}{5} = 3 \frac{1}{5}$ |
| 22) $\frac{8}{3} = 2 \frac{2}{3}$  | 27) $\frac{24}{4} = 6$             | 32) $\frac{17}{5} = 3 \frac{2}{5}$ | 37) $\frac{13}{4} = 3 \frac{1}{4}$ |
| 23) $\frac{10}{5} = 2$             | 28) $\frac{8}{2} = 4$              | 33) $\frac{18}{4} = 4 \frac{2}{4}$ | 38) $\frac{14}{3} = 4 \frac{2}{3}$ |
| 24) $\frac{11}{2} = 5 \frac{1}{2}$ | 29) $\frac{14}{6} = 2 \frac{2}{6}$ | 34) $\frac{13}{5} = 2 \frac{3}{5}$ | 39) $\frac{16}{4} = 4$             |
| 25) $\frac{10}{3} = 3 \frac{1}{3}$ | 30) $\frac{21}{3} = 7$             | 35) $\frac{10}{4} = 2 \frac{2}{4}$ | 40) $\frac{21}{5} = 4 \frac{1}{5}$ |

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Name:

Score:

Improper and Mixed Numbers: 2 [ C ]

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x

equivalent

compare

+/- mixed

adv decimals

imp/mixed

simplify

+/- common

decimals

revision

**Converting Mixed Numbers to Improper Fractions:**

- Remember:

$2 \frac{3}{5}$

$\frac{5}{5} + \frac{5}{5} + \frac{3}{5} = \frac{13}{5}$

or  $(2 \times \frac{5}{5}) + \frac{3}{5} = \frac{13}{5}$

**Mixed numbers to improper fractions**

1)  $3 \frac{1}{5} = \frac{16}{5}$

6)  $5 = \frac{20}{4}$

11)  $3 \frac{2}{6} = \frac{20}{6}$

16)  $5 \frac{2}{3} = \frac{17}{3}$

2)  $9 = \frac{45}{5}$

7)  $6 \frac{2}{5} = \frac{32}{5}$

12)  $8 = \frac{32}{4}$

17)  $5 \frac{1}{2} = \frac{11}{2}$

3)  $4 \frac{4}{5} = \frac{24}{5}$

8)  $2 = \frac{16}{8}$

13)  $4 \frac{3}{4} = \frac{19}{4}$

18)  $2 \frac{2}{4} = \frac{10}{4}$

4)  $1 \frac{4}{5} = \frac{9}{5}$

9)  $2 \frac{3}{4} = \frac{11}{4}$

14)  $2 \frac{1}{6} = \frac{13}{6}$

19)  $6 = \frac{12}{2}$

5)  $1 \frac{4}{7} = \frac{11}{7}$

10)  $4 \frac{2}{7} = \frac{30}{7}$

15)  $6 \frac{1}{2} = \frac{13}{2}$

20)  $1 \frac{3}{4} = \frac{7}{4}$

**Converting Improper Fractions to Mixed Numbers:**

- Remember:

$\frac{11}{4}$

$11 \div 4 = 2$  with a remainder of 3 so the mixed number is

$2 \frac{3}{4}$

**Improper fractions to mixed numbers**

21)  $\frac{13}{3} = 4 \frac{1}{3}$

26)  $\frac{13}{5} = 2 \frac{3}{5}$

31)  $\frac{17}{5} = 3 \frac{2}{5}$

36)  $\frac{16}{5} = 3 \frac{1}{5}$

22)  $\frac{7}{5} = 1 \frac{2}{5}$

27)  $\frac{24}{4} = 6$

32)  $\frac{14}{6} = 2 \frac{2}{6}$

37)  $\frac{13}{4} = 3 \frac{1}{4}$

23)  $\frac{10}{4} = 2 \frac{2}{4}$

28)  $\frac{10}{2} = 5$

33)  $\frac{10}{7} = 1 \frac{3}{7}$

38)  $\frac{14}{3} = 4 \frac{2}{3}$

24)  $\frac{11}{6} = 1 \frac{5}{6}$

29)  $\frac{18}{4} = 4 \frac{2}{4}$

34)  $\frac{16}{4} = 4$

39)  $\frac{11}{5} = 2 \frac{1}{5}$

25)  $\frac{10}{5} = 2$

30)  $\frac{21}{3} = 7$

35)  $\frac{15}{6} = 2 \frac{3}{6}$

40)  $\frac{12}{5} = 2 \frac{2}{5}$

**Revision**

41)  $4 + 5 = 9$

46)  $9 + 8 = 17$

51)  $13 - 10 = 3$

56)  $13 - 7 = 6$

42)  $6 + 5 = 11$

47)  $8 + 2 = 10$

52)  $15 - 6 = 9$

57)  $6 - 3 = 3$

43)  $7 + 2 = 9$

48)  $6 + 9 = 15$

53)  $16 - 8 = 8$

58)  $11 - 7 = 4$

44)  $4 + 2 = 6$

49)  $7 + 4 = 11$

54)  $8 - 4 = 4$

59)  $5 - 3 = 2$

45)  $6 + 4 = 10$

50)  $5 + 9 = 14$

55)  $17 - 9 = 8$

60)  $8 - 3 = 5$

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Name:

Score:

Improper and Mixed Numbers: 2 [ D ]

PROFESSOR PETE'S  
CLASSROOM

x

equivalent

compare

+/- mixed

adv decimals

imp/mixed

simplify

+/- common

decimals

revision

**Converting Mixed Numbers to Improper Fractions:**

- Remember:

$2\frac{3}{5}$

$\frac{5}{5} + \frac{5}{5} + \frac{3}{5} = \frac{13}{5}$  or  $(2 \times \frac{5}{5}) + \frac{3}{5} = \frac{13}{5}$

**Mixed numbers to improper fractions**

1)  $6\frac{2}{3} = \frac{20}{3}$

6)  $8 = \frac{48}{6}$

11)  $3\frac{2}{10} = \frac{32}{10}$

16)  $10\frac{2}{6} = \frac{62}{6}$

2)  $7 = \frac{35}{5}$

7)  $5\frac{2}{5} = \frac{27}{5}$

12)  $1 = \frac{2}{2}$

17)  $4\frac{4}{10} = \frac{44}{10}$

3)  $1\frac{7}{8} = \frac{15}{8}$

8)  $4 = \frac{32}{8}$

13)  $8\frac{1}{9} = \frac{73}{9}$

18)  $3\frac{5}{6} = \frac{23}{6}$

4)  $4\frac{4}{9} = \frac{40}{9}$

9)  $10\frac{1}{2} = \frac{21}{2}$

14)  $2\frac{5}{6} = \frac{17}{6}$

19)  $6 = \frac{36}{6}$

5)  $6\frac{5}{10} = \frac{65}{10}$

10)  $7\frac{3}{7} = \frac{52}{7}$

15)  $4\frac{3}{6} = \frac{27}{6}$

20)  $1\frac{3}{6} = \frac{9}{6}$

**Converting Improper Fractions to Mixed Numbers:**

- Remember:

$\frac{11}{4}$

 $11 \div 4 = 2$  with a remainder of 3  
so the mixed number is

$2\frac{3}{4}$

**Improper fractions to mixed numbers**

21)  $\frac{14}{3} = 4\frac{2}{3}$

26)  $\frac{17}{5} = 3\frac{2}{5}$

31)  $\frac{12}{5} = 2\frac{2}{5}$

36)  $\frac{13}{5} = 2\frac{3}{5}$

22)  $\frac{8}{4} = 2$

27)  $\frac{12}{4} = 3$

32)  $\frac{18}{4} = 4\frac{2}{4}$

37)  $\frac{13}{4} = 3\frac{1}{4}$

23)  $\frac{10}{5} = 2$

28)  $\frac{8}{2} = 4$

33)  $\frac{16}{5} = 3\frac{1}{5}$

38)  $\frac{16}{3} = 5\frac{1}{3}$

24)  $\frac{15}{4} = 3\frac{3}{4}$

29)  $\frac{11}{3} = 3\frac{2}{3}$

34)  $\frac{24}{5} = 4\frac{4}{5}$

39)  $\frac{16}{4} = 4$

25)  $\frac{19}{3} = 6\frac{1}{3}$

30)  $\frac{10}{6} = 1\frac{4}{6}$

35)  $\frac{10}{4} = 2\frac{2}{4}$

40)  $\frac{11}{2} = 5\frac{1}{2}$

**Revision**

41)  $7 + 2 = 9$

46)  $4 + 8 = 12$

51)  $13 - 5 = 8$

56)  $8 - 2 = 6$

42)  $7 + 3 = 10$

47)  $8 + 6 = 14$

52)  $11 - 4 = 7$

57)  $12 - 4 = 8$

43)  $9 + 2 = 11$

48)  $5 + 7 = 12$

53)  $18 - 9 = 9$

58)  $19 - 9 = 10$

44)  $6 + 8 = 14$

49)  $4 + 4 = 8$

54)  $9 - 7 = 2$

59)  $8 - 6 = 2$

45)  $5 + 5 = 10$

50)  $5 + 3 = 8$

55)  $13 - 6 = 7$

60)  $10 - 0 = 10$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Equivalent Fractions: 3 [ A ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Equivalent Fractions:**

Equivalent fractions represent the same amount even though they have different numerators and denominators.

For example:

$$\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$$

To make an equivalent fraction you have to multiply or divide the numerator and denominator by the same number.

$$\frac{2}{3} = \frac{2 \times 3}{3 \times 3} = \frac{6}{9} \quad \frac{15}{25} = \frac{15 \div 5}{25 \div 5} = \frac{3}{5}$$

**Equivalent Fractions**

1)  $\frac{1}{3} = \frac{7}{21}$

6)  $\frac{2}{5} = \frac{10}{25}$

11)  $\frac{5}{6} = \frac{30}{36}$

16)  $\frac{4}{6} = \frac{24}{36}$

2)  $\frac{2}{4} = \frac{6}{12}$

7)  $\frac{1}{3} = \frac{9}{27}$

12)  $\frac{5}{6} = \frac{35}{42}$

17)  $\frac{3}{8} = \frac{30}{80}$

3)  $\frac{1}{2} = \frac{2}{4}$

8)  $\frac{3}{4} = \frac{6}{8}$

13)  $\frac{3}{8} = \frac{6}{16}$

18)  $\frac{1}{4} = \frac{3}{12}$

4)  $\frac{2}{8} = \frac{14}{56}$

9)  $\frac{4}{5} = \frac{12}{15}$

14)  $\frac{1}{4} = \frac{7}{28}$

19)  $\frac{1}{2} = \frac{7}{14}$

5)  $\frac{1}{6} = \frac{9}{54}$

10)  $\frac{4}{5} = \frac{28}{35}$

15)  $\frac{4}{8} = \frac{28}{56}$

20)  $\frac{1}{5} = \frac{6}{30}$

**Multiplying fractions by whole numbers**

21)  $\frac{1}{9}$  of 81 = 9

26)  $\frac{1}{6}$  of 30 = 5

22)  $\frac{3}{9}$  of 81 = 27

27)  $\frac{4}{6}$  of 30 = 20

23)  $\frac{1}{10}$  of 50 = 5

28)  $\frac{1}{6}$  of 54 = 9

24)  $\frac{6}{10}$  of 50 = 30

29)  $\frac{1}{4}$  of 36 = 9

25)  $\frac{1}{6}$  of 18 = 3

30)  $\frac{3}{4}$  of 36 = 27

**Multiplying whole numbers by fractions**

31)  $35 \times \frac{1}{7} = 5$

36)  $32 \times \frac{2}{4} = 16$

32)  $35 \times \frac{5}{7} = 25$

37)  $24 \times \frac{3}{4} = 18$

33)  $8 \times \frac{1}{2} = 4$

38)  $10 \times \frac{1}{10} = 1$

34)  $27 \times \frac{1}{3} = 9$

39)  $36 \times \frac{7}{9} = 28$

35)  $28 \times \frac{3}{4} = 21$

40)  $6 \times \frac{5}{6} = 5$

**Revision**

41)  $8 + 4 = 12$

46)  $7 + 7 = 14$

51)  $13 - 7 = 6$

56)  $6 - 3 = 3$

42)  $9 + 4 = 13$

47)  $7 + 6 = 13$

52)  $5 - 3 = 2$

57)  $16 - 7 = 9$

43)  $8 + 7 = 15$

48)  $9 + 8 = 17$

53)  $15 - 7 = 8$

58)  $11 - 4 = 7$

44)  $9 + 7 = 16$

49)  $9 + 9 = 18$

54)  $16 - 9 = 7$

59)  $20 - 10 = 10$

45)  $5 + 8 = 13$

50)  $6 + 2 = 8$

55)  $19 - 9 = 10$

60)  $7 - 4 = 3$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Equivalent Fractions: 3 [ B ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Equivalent fractions**

1)  $\frac{1}{2} = \frac{3}{6}$

6)  $\frac{4}{8} = \frac{8}{16}$

11)  $\frac{1}{3} = \frac{8}{24}$

16)  $\frac{1}{3} = \frac{3}{9}$

2)  $\frac{1}{4} = \frac{8}{32}$

7)  $\frac{3}{5} = \frac{30}{50}$

12)  $\frac{1}{4} = \frac{9}{36}$

17)  $\frac{3}{5} = \frac{6}{10}$

3)  $\frac{1}{4} = \frac{7}{28}$

8)  $\frac{2}{3} = \frac{8}{12}$

13)  $\frac{1}{2} = \frac{7}{14}$

18)  $\frac{3}{6} = \frac{12}{24}$

4)  $\frac{5}{8} = \frac{25}{40}$

9)  $\frac{3}{6} = \frac{6}{12}$

14)  $\frac{1}{4} = \frac{10}{40}$

19)  $\frac{3}{4} = \frac{18}{24}$

5)  $\frac{1}{6} = \frac{2}{12}$

10)  $\frac{1}{3} = \frac{6}{18}$

15)  $\frac{3}{5} = \frac{15}{25}$

20)  $\frac{1}{2} = \frac{5}{10}$

**Multiplying fractions by whole numbers**

21)  $\frac{1}{6}$  of 36 = 6

26)  $\frac{1}{7}$  of 35 = 5

22)  $\frac{4}{6}$  of 36 = 24

27)  $\frac{2}{7}$  of 35 = 10

23)  $\frac{1}{6}$  of 30 = 5

28)  $\frac{1}{8}$  of 32 = 4

24)  $\frac{5}{6}$  of 30 = 25

29)  $\frac{4}{8}$  of 32 = 16

25)  $\frac{1}{2}$  of 18 = 9

30)  $\frac{1}{8}$  of 16 = 2

**Multiplying whole numbers by fractions**

31)  $12 \times \frac{1}{2} = 6$

36)  $40 \times \frac{1}{5} = 8$

32)  $45 \times \frac{1}{5} = 9$

37)  $40 \times \frac{3}{5} = 24$

33)  $45 \times \frac{4}{5} = 36$

38)  $35 \times \frac{1}{5} = 7$

34)  $32 \times \frac{1}{4} = 8$

39)  $35 \times \frac{4}{5} = 28$

35)  $32 \times \frac{3}{4} = 24$

40)  $32 \times \frac{1}{8} = 4$

**Revision**

41)  $5 + 8 = 13$

46)  $4 + 3 = 7$

51)  $16 - 6 = 10$

56)  $18 - 8 = 10$

42)  $4 + 2 = 6$

47)  $9 + 7 = 16$

52)  $7 - 5 = 2$

57)  $15 - 6 = 9$

43)  $5 + 4 = 9$

48)  $8 + 9 = 17$

53)  $14 - 8 = 6$

58)  $16 - 9 = 7$

44)  $4 + 6 = 10$

49)  $5 + 2 = 7$

54)  $7 - 3 = 4$

59)  $18 - 10 = 8$

45)  $8 + 2 = 10$

50)  $6 + 5 = 11$

55)  $18 - 9 = 9$

60)  $14 - 6 = 8$

**Improper Fractions to Mixed Numbers**

61)  $\frac{10}{4} = 2 \frac{2}{4}$

65)  $\frac{52}{10} = 5 \frac{2}{10}$

62)  $\frac{36}{6} = 6$

66)  $\frac{17}{6} = 2 \frac{5}{6}$

63)  $\frac{15}{8} = 1 \frac{7}{8}$

67)  $\frac{22}{9} = 2 \frac{4}{9}$

64)  $\frac{35}{9} = 3 \frac{8}{9}$

68)  $\frac{34}{8} = 4 \frac{2}{8}$

**Mixed Numbers to Improper Fractions**

69)  $2 \frac{3}{5} = \frac{13}{5}$

73)  $7 \frac{7}{10} = \frac{77}{10}$

70)  $8 = \frac{80}{10}$

74)  $6 \frac{2}{3} = \frac{20}{3}$

71)  $4 \frac{1}{6} = \frac{25}{6}$

75)  $9 \frac{2}{10} = \frac{92}{10}$

72)  $3 \frac{8}{10} = \frac{38}{10}$

76)  $10 = \frac{40}{4}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Equivalent Fractions: 3 [ C ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Equivalent Fractions**

1)  $\frac{3}{5} = \frac{18}{30}$

6)  $\frac{5}{8} = \frac{10}{16}$

11)  $\frac{1}{2} = \frac{6}{12}$

16)  $\frac{2}{4} = \frac{8}{16}$

2)  $\frac{2}{3} = \frac{18}{27}$

7)  $\frac{3}{4} = \frac{18}{24}$

12)  $\frac{2}{4} = \frac{4}{8}$

17)  $\frac{4}{5} = \frac{36}{45}$

3)  $\frac{1}{2} = \frac{8}{16}$

8)  $\frac{2}{5} = \frac{8}{20}$

13)  $\frac{1}{5} = \frac{7}{35}$

18)  $\frac{2}{5} = \frac{6}{15}$

4)  $\frac{2}{3} = \frac{16}{24}$

9)  $\frac{5}{8} = \frac{30}{48}$

14)  $\frac{4}{6} = \frac{8}{12}$

19)  $\frac{3}{5} = \frac{15}{25}$

5)  $\frac{2}{4} = \frac{12}{24}$

10)  $\frac{3}{6} = \frac{27}{54}$

15)  $\frac{1}{3} = \frac{2}{6}$

20)  $\frac{3}{6} = \frac{12}{24}$

**Multiplying fractions by whole numbers**

21)  $\frac{5}{7}$  of 28 = 20

26)  $\frac{3}{5}$  of 45 = 27

22)  $\frac{1}{3}$  of 21 = 7

27)  $\frac{6}{10}$  of 30 = 18

23)  $\frac{1}{2}$  of 26 = 13

28)  $\frac{4}{5}$  of 40 = 32

24)  $\frac{1}{2}$  of 32 = 16

29)  $\frac{1}{2}$  of 48 = 24

25)  $\frac{5}{6}$  of 12 = 10

30)  $\frac{3}{4}$  of 20 = 15

**Multiplying whole numbers by fractions**

31)  $30 \times \frac{4}{6} = 20$

36)  $42 \times \frac{4}{7} = 24$

32)  $21 \times \frac{1}{7} = 3$

37)  $32 \times \frac{5}{8} = 20$

33)  $24 \times \frac{3}{6} = 12$

38)  $40 \times \frac{7}{10} = 28$

34)  $30 \times \frac{4}{6} = 20$

39)  $48 \times \frac{2}{3} = 32$

35)  $7 \times \frac{6}{7} = 6$

40)  $16 \times \frac{5}{8} = 10$

**Revision**

41)  $5 + 4 = 9$

46)  $6 + 9 = 15$

51)  $10 - 5 = 5$

56)  $6 - 2 = 4$

42)  $7 + 5 = 12$

47)  $8 + 4 = 12$

52)  $15 - 7 = 8$

57)  $13 - 10 = 3$

43)  $7 + 6 = 13$

48)  $4 + 5 = 9$

53)  $12 - 10 = 2$

58)  $9 - 7 = 2$

44)  $9 + 9 = 18$

49)  $9 + 6 = 15$

54)  $14 - 5 = 9$

59)  $4 - 2 = 2$

45)  $7 + 7 = 14$

50)  $7 + 3 = 10$

55)  $18 - 9 = 9$

60)  $6 - 3 = 3$

**Improper Fractions to Mixed Numbers**

61)  $\frac{12}{8} = 1 \frac{4}{8}$

65)  $\frac{18}{10} = 1 \frac{8}{10}$

62)  $\frac{18}{3} = 6$

66)  $\frac{13}{6} = 2 \frac{1}{6}$

63)  $\frac{11}{3} = 3 \frac{2}{3}$

67)  $\frac{17}{9} = 1 \frac{8}{9}$

64)  $\frac{25}{8} = 3 \frac{1}{8}$

68)  $\frac{14}{3} = 4 \frac{2}{3}$

**Mixed Numbers to Improper Fractions**

69)  $2 \frac{3}{7} = \frac{17}{7}$

73)  $4 \frac{9}{10} = \frac{49}{10}$

70)  $7 = \frac{70}{10}$

74)  $1 \frac{3}{5} = \frac{8}{5}$

71)  $4 \frac{1}{4} = \frac{17}{4}$

75)  $6 \frac{5}{10} = \frac{65}{10}$

72)  $3 \frac{1}{5} = \frac{16}{5}$

76)  $10 = \frac{100}{10}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Equivalent Fractions: 3 [ D ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Equivalent Fractions**

- |                                  |                                  |                                   |                                   |
|----------------------------------|----------------------------------|-----------------------------------|-----------------------------------|
| 1) $\frac{2}{3} = \frac{4}{6}$   | 6) $\frac{1}{6} = \frac{5}{30}$  | 11) $\frac{7}{8} = \frac{28}{32}$ | 16) $\frac{1}{5} = \frac{8}{40}$  |
| 2) $\frac{1}{2} = \frac{5}{10}$  | 7) $\frac{4}{8} = \frac{24}{48}$ | 12) $\frac{4}{5} = \frac{20}{25}$ | 17) $\frac{3}{6} = \frac{6}{12}$  |
| 3) $\frac{6}{8} = \frac{24}{32}$ | 8) $\frac{3}{4} = \frac{24}{32}$ | 13) $\frac{4}{5} = \frac{40}{50}$ | 18) $\frac{5}{8} = \frac{20}{32}$ |
| 4) $\frac{3}{6} = \frac{30}{60}$ | 9) $\frac{1}{5} = \frac{7}{35}$  | 14) $\frac{2}{4} = \frac{12}{24}$ | 19) $\frac{1}{5} = \frac{6}{30}$  |
| 5) $\frac{1}{2} = \frac{7}{14}$  | 10) $\frac{1}{2} = \frac{4}{8}$  | 15) $\frac{1}{5} = \frac{7}{35}$  | 20) $\frac{2}{6} = \frac{12}{36}$ |

**Multiplying fractions by whole numbers**

- |                              |                              |
|------------------------------|------------------------------|
| 21) $\frac{7}{8}$ of 48 = 42 | 26) $\frac{4}{5}$ of 25 = 20 |
| 22) $\frac{4}{6}$ of 36 = 24 | 27) $\frac{3}{7}$ of 21 = 9  |
| 23) $\frac{2}{7}$ of 14 = 4  | 28) $\frac{1}{3}$ of 45 = 15 |
| 24) $\frac{6}{8}$ of 16 = 12 | 29) $\frac{2}{7}$ of 42 = 12 |
| 25) $\frac{3}{10}$ of 10 = 3 | 30) $\frac{8}{9}$ of 81 = 72 |

**Multiplying whole numbers by fractions**

- |                                  |                                   |
|----------------------------------|-----------------------------------|
| 31) $12 \times \frac{1}{2} = 6$  | 36) $21 \times \frac{5}{7} = 15$  |
| 32) $36 \times \frac{7}{9} = 28$ | 37) $72 \times \frac{4}{9} = 32$  |
| 33) $18 \times \frac{2}{6} = 6$  | 38) $42 \times \frac{1}{7} = 6$   |
| 34) $12 \times \frac{1}{2} = 6$  | 39) $40 \times \frac{3}{10} = 12$ |
| 35) $64 \times \frac{3}{8} = 24$ | 40) $10 \times \frac{9}{10} = 9$  |

**Revision**

- |                  |                  |                   |                   |
|------------------|------------------|-------------------|-------------------|
| 41) $8 + 5 = 13$ | 46) $9 + 2 = 11$ | 51) $17 - 9 = 8$  | 56) $19 - 10 = 9$ |
| 42) $7 + 5 = 12$ | 47) $4 + 8 = 12$ | 52) $19 - 9 = 10$ | 57) $16 - 9 = 7$  |
| 43) $7 + 4 = 11$ | 48) $7 + 2 = 9$  | 53) $6 - 4 = 2$   | 58) $14 - 5 = 9$  |
| 44) $4 + 6 = 10$ | 49) $9 + 5 = 14$ | 54) $12 - 8 = 4$  | 59) $13 - 9 = 4$  |
| 45) $7 + 8 = 15$ | 50) $5 + 6 = 11$ | 55) $18 - 9 = 9$  | 60) $9 - 2 = 7$   |

**Improper Fractions to Mixed Numbers**

- |                                    |                                    |
|------------------------------------|------------------------------------|
| 61) $\frac{12}{5} = 2 \frac{2}{5}$ | 65) $\frac{13}{3} = 4 \frac{1}{3}$ |
| 62) $\frac{12}{6} = 2$             | 66) $\frac{14}{3} = 4 \frac{2}{3}$ |
| 63) $\frac{12}{8} = 1 \frac{4}{8}$ | 67) $\frac{21}{9} = 2 \frac{3}{9}$ |
| 64) $\frac{24}{9} = 2 \frac{6}{9}$ | 68) $\frac{11}{8} = 1 \frac{3}{8}$ |

**Mixed Numbers to Improper Fractions**

- |                                      |                                      |
|--------------------------------------|--------------------------------------|
| 69) $4 \frac{1}{3} = \frac{13}{3}$   | 73) $1 \frac{1}{5} = \frac{6}{5}$    |
| 70) $5 = \frac{25}{5}$               | 74) $6 \frac{6}{10} = \frac{66}{10}$ |
| 71) $5 \frac{2}{10} = \frac{52}{10}$ | 75) $2 \frac{3}{12} = \frac{27}{12}$ |
| 72) $3 \frac{1}{3} = \frac{10}{3}$   | 76) $11 = \frac{110}{10}$            |

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Simplifying Fractions: 4 [A]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Simplifying Fractions:**

Simplifying a fraction means to make an equivalent fraction which has numbers as small as possible. To do this, find the equivalent fraction with the smallest numbers. This means dividing the numerator and denominator with common factors.

For example:  $\frac{3}{9} = \frac{1}{3}$

In some cases a fraction can be simplified even further if you look harder.  $\frac{6}{12} = \frac{3}{6} = \frac{1}{2}$

**Simplify these fractions**

1)  $\frac{3}{9} = \frac{1}{3}$

6)  $\frac{9}{12} = \frac{3}{4}$

11)  $\frac{6}{18} = \frac{1}{3}$

16)  $\frac{15}{18} = \frac{5}{6}$

2)  $\frac{20}{25} = \frac{4}{5}$

7)  $\frac{12}{30} = \frac{2}{5}$

12)  $\frac{10}{15} = \frac{2}{3}$

17)  $\frac{6}{36} = \frac{1}{6}$

3)  $\frac{3}{12} = \frac{1}{4}$

8)  $\frac{24}{30} = \frac{4}{5}$

13)  $\frac{3}{12} = \frac{1}{4}$

18)  $\frac{12}{15} = \frac{4}{5}$

4)  $\frac{10}{12} = \frac{5}{6}$

9)  $\frac{18}{24} = \frac{3}{4}$

14)  $\frac{8}{10} = \frac{4}{5}$

19)  $\frac{24}{30} = \frac{4}{5}$

5)  $\frac{18}{27} = \frac{2}{3}$

10)  $\frac{4}{24} = \frac{1}{6}$

15)  $\frac{12}{30} = \frac{2}{5}$

20)  $\frac{4}{16} = \frac{1}{4}$

**Multiplying fractions by whole numbers**

21)  $\frac{1}{5}$  of 20 = 4

26)  $\frac{8}{9}$  of 45 = 40

22)  $\frac{5}{10}$  of 20 = 10

27)  $\frac{6}{7}$  of 21 = 18

23)  $\frac{2}{3}$  of 27 = 18

28)  $\frac{2}{7}$  of 14 = 4

24)  $\frac{5}{7}$  of 35 = 25

29)  $\frac{2}{5}$  of 40 = 16

25)  $\frac{2}{3}$  of 6 = 4

30)  $\frac{2}{9}$  of 18 = 4

**Multiplying whole numbers by fractions**

31)  $27 \times \frac{7}{9} = 21$

36)  $27 \times \frac{8}{9} = 24$

32)  $6 \times \frac{5}{6} = 5$

37)  $45 \times \frac{5}{9} = 25$

33)  $36 \times \frac{3}{6} = 18$

38)  $9 \times \frac{5}{9} = 5$

34)  $20 \times \frac{7}{10} = 14$

39)  $32 \times \frac{1}{8} = 4$

35)  $15 \times \frac{2}{3} = 10$

40)  $18 \times \frac{1}{2} = 9$

**Revision**

41)  $4 + 3 = 7$

46)  $6 + 4 = 10$

51)  $16 - 8 = 8$

56)  $13 - 9 = 4$

42)  $4 + 7 = 11$

47)  $5 + 2 = 7$

52)  $11 - 3 = 8$

57)  $13 - 3 = 10$

43)  $4 + 9 = 13$

48)  $9 + 6 = 15$

53)  $5 - 3 = 2$

58)  $14 - 6 = 8$

44)  $9 + 3 = 12$

49)  $7 + 6 = 13$

54)  $18 - 10 = 8$

59)  $4 - 2 = 2$

45)  $5 + 8 = 13$

50)  $6 + 6 = 12$

55)  $13 - 7 = 6$

60)  $20 - 10 = 10$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Simplifying Fractions: 4 [ B ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Simplifying Improper Fractions:**

First simplify the improper fraction. This makes the numbers smaller to work with.  
Then turn the improper fraction into a mixed number.

For example:  $\frac{55}{30} \frac{11}{6} = 1 \frac{5}{6}$

**Simplify these fractions**

- |                                     |                                     |                                     |                                     |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| 1) $\frac{42}{20} = 2 \frac{1}{10}$ | 7) $\frac{42}{15} = 2 \frac{4}{5}$  | 13) $\frac{36}{32} = 1 \frac{1}{8}$ | 19) $\frac{35}{10} = 3 \frac{1}{2}$ |
| 2) $\frac{20}{12} = 1 \frac{2}{3}$  | 8) $\frac{24}{16} = 1 \frac{1}{2}$  | 14) $\frac{4}{6} = \frac{2}{3}$     | 20) $\frac{6}{18} = \frac{1}{3}$    |
| 3) $\frac{5}{2} = 2 \frac{1}{2}$    | 9) $\frac{15}{6} = 2 \frac{1}{2}$   | 15) $\frac{27}{18} = 1 \frac{1}{2}$ | 21) $\frac{18}{36} = \frac{1}{2}$   |
| 4) $\frac{14}{6} = 2 \frac{1}{3}$   | 10) $\frac{16}{12} = 1 \frac{1}{3}$ | 16) $\frac{20}{25} = \frac{4}{5}$   | 22) $\frac{12}{16} = \frac{3}{4}$   |
| 5) $\frac{60}{30} = 2$              | 11) $\frac{25}{10} = 2 \frac{1}{2}$ | 17) $\frac{21}{15} = 1 \frac{2}{5}$ | 23) $\frac{32}{12} = 2 \frac{2}{3}$ |
| 6) $\frac{40}{32} = 1 \frac{1}{4}$  | 12) $\frac{15}{12} = 1 \frac{1}{4}$ | 18) $\frac{4}{12} = \frac{1}{3}$    | 24) $\frac{2}{6} = \frac{1}{3}$     |

**Multiplying fractions by whole numbers**

- |                              |                              |
|------------------------------|------------------------------|
| 25) $\frac{5}{7}$ of 35 = 25 | 30) $\frac{6}{9}$ of 9 = 6   |
| 26) $\frac{1}{2}$ of 12 = 6  | 31) $\frac{2}{4}$ of 40 = 20 |
| 27) $\frac{2}{5}$ of 45 = 18 | 32) $\frac{1}{2}$ of 6 = 3   |
| 28) $\frac{4}{10}$ of 10 = 4 | 33) $\frac{3}{4}$ of 32 = 24 |
| 29) $\frac{3}{4}$ of 36 = 27 | 34) $\frac{1}{3}$ of 18 = 6  |

**Multiplying whole numbers by fractions**

- |                                   |                                  |
|-----------------------------------|----------------------------------|
| 35) $40 \times \frac{8}{10} = 32$ | 40) $4 \times \frac{1}{2} = 2$   |
| 36) $30 \times \frac{3}{10} = 9$  | 41) $40 \times \frac{2}{4} = 20$ |
| 37) $24 \times \frac{2}{3} = 16$  | 42) $6 \times \frac{1}{2} = 3$   |
| 38) $16 \times \frac{3}{8} = 6$   | 43) $32 \times \frac{6}{8} = 24$ |
| 39) $12 \times \frac{2}{3} = 8$   | 44) $14 \times \frac{3}{7} = 6$  |

**Revision**

- |                  |                  |                  |                   |
|------------------|------------------|------------------|-------------------|
| 45) $8 + 2 = 10$ | 50) $4 + 8 = 12$ | 55) $11 - 4 = 7$ | 60) $10 - 5 = 5$  |
| 46) $8 + 5 = 13$ | 51) $6 + 5 = 11$ | 56) $13 - 8 = 5$ | 61) $12 - 8 = 4$  |
| 47) $5 + 3 = 8$  | 52) $7 + 7 = 14$ | 57) $4 - 2 = 2$  | 62) $19 - 9 = 10$ |
| 48) $5 + 9 = 14$ | 53) $5 + 8 = 13$ | 58) $9 - 7 = 2$  | 63) $7 - 5 = 2$   |
| 49) $9 + 7 = 16$ | 54) $4 + 2 = 6$  | 59) $11 - 5 = 6$ | 64) $18 - 8 = 10$ |

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Simplifying Fractions: 4 [ C ]



x imp/mixed	equivalent simplify	compare +/- common	+/- mixed decimals	adv decimals revision
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**Simplify these fractions**

1)  $\frac{15}{9} = 1\frac{2}{3}$

6)  $\frac{55}{40} = 1\frac{3}{8}$

11)  $\frac{15}{18} = \frac{5}{6}$

16)  $\frac{18}{9} = 2$

2)  $\frac{55}{50} = 1\frac{1}{10}$

7)  $\frac{15}{12} = 1\frac{1}{4}$

12)  $\frac{10}{25} = \frac{2}{5}$

17)  $\frac{15}{6} = 2\frac{1}{2}$

3)  $\frac{28}{12} = 2\frac{1}{3}$

8)  $\frac{56}{32} = 1\frac{3}{4}$

13)  $\frac{10}{8} = 1\frac{1}{4}$

18)  $\frac{18}{12} = 1\frac{1}{2}$

4)  $\frac{42}{18} = 2\frac{1}{3}$

9)  $\frac{24}{30} = \frac{4}{5}$

14)  $\frac{28}{16} = 1\frac{3}{4}$

19)  $\frac{27}{12} = 2\frac{1}{4}$

5)  $\frac{15}{24} = \frac{5}{8}$

10)  $\frac{14}{8} = 1\frac{3}{4}$

15)  $\frac{30}{15} = 2$

20)  $\frac{35}{15} = 2\frac{1}{3}$

**Equivalent Fractions**

21)  $\frac{6}{8} = \frac{12}{16}$

25)  $\frac{1}{4} = \frac{6}{24}$

29)  $\frac{5}{6} = \frac{40}{48}$

33)  $\frac{1}{2} = \frac{3}{6}$

22)  $\frac{1}{6} = \frac{5}{30}$

26)  $\frac{2}{4} = \frac{16}{32}$

30)  $\frac{1}{5} = \frac{5}{25}$

34)  $\frac{2}{5} = \frac{4}{10}$

23)  $\frac{2}{4} = \frac{6}{12}$

27)  $\frac{1}{2} = \frac{2}{4}$

31)  $\frac{4}{6} = \frac{20}{30}$

35)  $\frac{2}{6} = \frac{18}{54}$

24)  $\frac{1}{2} = \frac{9}{18}$

28)  $\frac{1}{3} = \frac{4}{12}$

32)  $\frac{1}{2} = \frac{6}{12}$

36)  $\frac{1}{2} = \frac{10}{20}$

**Multiplying fractions by whole numbers**

37)  $\frac{1}{3}$  of 27 = 9

41)  $\frac{2}{3}$  of 18 = 12

38)  $\frac{4}{7}$  of 21 = 12

42)  $\frac{3}{8}$  of 24 = 9

39)  $\frac{1}{5}$  of 30 = 6

43)  $\frac{2}{3}$  of 15 = 10

40)  $\frac{7}{8}$  of 40 = 35

44)  $\frac{2}{5}$  of 15 = 6

**Multiplying whole numbers by fractions**

45)  $27 \times \frac{1}{9} = 3$

49)  $15 \times \frac{1}{3} = 5$

46)  $18 \times \frac{5}{9} = 10$

50)  $20 \times \frac{3}{10} = 6$

47)  $30 \times \frac{2}{10} = 6$

51)  $16 \times \frac{5}{8} = 10$

48)  $40 \times \frac{9}{10} = 36$

52)  $45 \times \frac{8}{9} = 40$

**Revision**

53)  $4 + 4 = 8$

57)  $8 + 8 = 16$

61)  $10 - 1 = 9$

65)  $7 - 5 = 2$

54)  $8 + 5 = 13$

58)  $7 + 3 = 10$

62)  $19 - 9 = 10$

66)  $13 - 9 = 4$

55)  $4 + 7 = 11$

59)  $8 + 9 = 17$

63)  $12 - 7 = 5$

67)  $11 - 5 = 6$

56)  $5 + 6 = 11$

60)  $4 + 2 = 6$

64)  $20 - 10 = 10$

68)  $15 - 5 = 10$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Simplifying Fractions: 4 [ D ]



x imp/mixed	equivalent simplify	compare +/- common	+/- mixed decimals	adv decimals revision
----------------	------------------------	-----------------------	-----------------------	--------------------------

**Simplify these fractions**

1)  $\frac{14}{8} = 1\frac{3}{4}$

6)  $\frac{45}{40} = 1\frac{1}{8}$

11)  $\frac{18}{15} = 1\frac{1}{5}$

16)  $\frac{4}{24} = \frac{1}{6}$

2)  $\frac{42}{32} = 1\frac{5}{16}$

7)  $\frac{28}{24} = 1\frac{1}{6}$

12)  $\frac{32}{24} = 1\frac{1}{3}$

17)  $\frac{80}{40} = 2$

3)  $\frac{12}{16} = \frac{3}{4}$

8)  $\frac{8}{20} = \frac{2}{5}$

13)  $\frac{9}{18} = \frac{1}{2}$

18)  $\frac{2}{8} = \frac{1}{4}$

4)  $\frac{6}{20} = \frac{3}{10}$

9)  $\frac{16}{8} = 2$

14)  $\frac{36}{48} = \frac{3}{4}$

19)  $\frac{24}{12} = 2$

5)  $\frac{25}{15} = 1\frac{2}{3}$

10)  $\frac{6}{36} = \frac{1}{6}$

15)  $\frac{30}{24} = 1\frac{1}{4}$

20)  $\frac{40}{20} = 2$

**Equivalent Fractions**

21)  $\frac{1}{2} = \frac{4}{8}$

25)  $\frac{1}{4} = \frac{6}{24}$

29)  $\frac{1}{3} = \frac{4}{12}$

33)  $\frac{1}{4} = \frac{7}{28}$

22)  $\frac{1}{3} = \frac{10}{30}$

26)  $\frac{1}{8} = \frac{8}{64}$

30)  $\frac{1}{6} = \frac{2}{12}$

34)  $\frac{1}{3} = \frac{2}{6}$

23)  $\frac{3}{6} = \frac{30}{60}$

27)  $\frac{2}{5} = \frac{10}{25}$

31)  $\frac{2}{4} = \frac{4}{8}$

35)  $\frac{2}{6} = \frac{20}{60}$

24)  $\frac{2}{4} = \frac{14}{28}$

28)  $\frac{2}{8} = \frac{4}{16}$

32)  $\frac{2}{5} = \frac{18}{45}$

36)  $\frac{7}{8} = \frac{21}{24}$

**Multiplying fractions by whole numbers**

37)  $\frac{1}{4}$  of 16 = 4

41)  $\frac{1}{7}$  of 7 = 1

38)  $\frac{4}{7}$  of 21 = 12

42)  $\frac{3}{7}$  of 14 = 6

39)  $\frac{9}{10}$  of 30 = 27

43)  $\frac{1}{2}$  of 12 = 6

40)  $\frac{3}{8}$  of 8 = 3

44)  $\frac{1}{4}$  of 36 = 9

**Multiplying whole numbers by fractions**

45)  $18 \times \frac{1}{6} = 3$

49)  $7 \times \frac{1}{7} = 1$

46)  $20 \times \frac{1}{2} = 10$

50)  $9 \times \frac{4}{9} = 4$

47)  $36 \times \frac{3}{4} = 27$

51)  $30 \times \frac{8}{10} = 24$

48)  $10 \times \frac{3}{10} = 3$

52)  $35 \times \frac{1}{5} = 7$

**Revision**

53)  $5 + 4 = 9$

57)  $6 + 3 = 9$

61)  $11 - 9 = 2$

65)  $5 - 3 = 2$

54)  $8 + 2 = 10$

58)  $9 + 4 = 13$

62)  $16 - 9 = 7$

66)  $6 - 3 = 3$

55)  $6 + 9 = 15$

59)  $6 + 6 = 12$

63)  $19 - 10 = 9$

67)  $7 - 3 = 4$

56)  $9 + 3 = 12$

60)  $8 + 6 = 14$

64)  $20 - 10 = 10$

68)  $9 - 6 = 3$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Comparing Fractions: 5 [A]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Comparing Fractions:**

1) Fractions with the same denominators are easy to compare: the numerator tells you which fraction is larger:

$$\frac{3}{4} > \frac{2}{4}$$

2) When the denominators are different, find equivalent fractions with the same denominator (the Lowest Common Denominator)

$$\frac{3}{4} \square \frac{7}{8} \quad \frac{6}{8} \cancel{\frac{3}{4}} < \frac{7}{8}$$

3) Sometimes both fractions need changing to make the denominators the same:

$$\frac{3}{4} \square \frac{5}{6} \quad \frac{9}{12} \cancel{\frac{3}{4}} < \cancel{\frac{5}{6}} \frac{10}{12}$$

Or

4) Think of the size of the fraction. Is it smaller than a half?... or larger? Is it near a whole?... or nearer zero?

$$\frac{1}{4} \square \frac{7}{8}$$

Where does this fraction sit on a number line compared to the other fraction?

**Insert <, > or =**

1)  $\frac{5}{8} < \frac{7}{8}$

6)  $\frac{3}{8} < \frac{1}{2}$

11)  $\frac{2}{3} > \frac{3}{6}$

16)  $\frac{4}{6} > \frac{1}{6}$

2)  $\frac{1}{4} < \frac{2}{4}$

7)  $\frac{7}{8} > \frac{3}{8}$

12)  $\frac{11}{15} < \frac{4}{5}$

17)  $\frac{3}{5} = \frac{6}{10}$

3)  $\frac{2}{8} < \frac{3}{4}$

8)  $\frac{4}{8} < \frac{5}{8}$

13)  $\frac{3}{4} < \frac{5}{6}$

18)  $\frac{2}{3} > \frac{3}{5}$

4)  $\frac{1}{2} = \frac{4}{8}$

9)  $\frac{6}{8} = \frac{3}{4}$

14)  $\frac{2}{3} = \frac{4}{6}$

19)  $\frac{3}{4} > \frac{1}{3}$

5)  $\frac{1}{2} = \frac{3}{6}$

10)  $\frac{2}{5} > \frac{3}{10}$

15)  $\frac{3}{6} = \frac{2}{4}$

20)  $\frac{1}{3} < \frac{2}{4}$

**Equivalent fractions**

21)  $\frac{1}{3} = \frac{9}{27} = \frac{3}{9}$

24)  $\frac{1}{5} = \frac{5}{25} = \frac{10}{50}$

27)  $\frac{7}{8} = \frac{35}{40} = \frac{70}{80}$

30)  $\frac{7}{8} = \frac{28}{32} = \frac{14}{16}$

22)  $\frac{2}{3} = \frac{18}{27} = \frac{6}{9}$

25)  $\frac{1}{5} = \frac{7}{35} = \frac{8}{40}$

28)  $\frac{1}{2} = \frac{4}{8} = \frac{6}{12}$

31)  $\frac{1}{2} = \frac{7}{14} = \frac{6}{12}$

23)  $\frac{1}{3} = \frac{8}{24} = \frac{2}{6}$

26)  $\frac{5}{6} = \frac{30}{36} = \frac{40}{48}$

29)  $\frac{2}{8} = \frac{18}{72} = \frac{4}{16}$

32)  $\frac{4}{6} = \frac{36}{54} = \frac{16}{24}$

**Multiplying fractions by whole numbers**

33)  $\frac{3}{4}$  of 20 = 15

37)  $\frac{2}{4}$  of 32 = 16

34)  $\frac{4}{9}$  of 36 = 16

38)  $\frac{8}{10}$  of 10 = 8

35)  $\frac{2}{10}$  of 20 = 4

39)  $\frac{2}{5}$  of 45 = 18

36)  $\frac{3}{4}$  of 36 = 27

40)  $\frac{3}{6}$  of 24 = 12

**Multiplying whole numbers by fractions**

41)  $18 \times \frac{2}{6} = 6$

45)  $30 \times \frac{7}{10} = 21$

42)  $12 \times \frac{2}{3} = 8$

46)  $21 \times \frac{1}{7} = 3$

43)  $42 \times \frac{3}{6} = 21$

47)  $48 \times \frac{3}{8} = 18$

44)  $36 \times \frac{6}{9} = 24$

48)  $50 \times \frac{7}{10} = 35$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Comparing Fractions: 5 [ B ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Comparing Fractions with the Same Numerator:**

Use your knowledge of fractions to make comparing them easier.

When the numerators are the same, the denominator tells you which fraction is larger. For example, quarters/fourths are larger than fifths, so:

$$\frac{3}{4} > \frac{3}{5}$$

**Insert <, > or =**

1)  $\frac{1}{8} < \frac{1}{3}$

6)  $\frac{2}{3} > \frac{2}{4}$

11)  $\frac{6}{9} < \frac{7}{9}$

16)  $\frac{2}{6} < \frac{2}{3}$

2)  $\frac{2}{8} < \frac{2}{3}$

7)  $\frac{2}{8} < \frac{2}{3}$

12)  $\frac{2}{3} > \frac{2}{4}$

17)  $\frac{2}{3} > \frac{2}{5}$

3)  $\frac{1}{5} > \frac{1}{8}$

8)  $\frac{7}{8} > \frac{7}{10}$

13)  $\frac{3}{6} = \frac{6}{12}$

18)  $\frac{1}{3} > \frac{1}{6}$

4)  $\frac{4}{5} > \frac{4}{8}$

9)  $\frac{1}{2} = \frac{4}{8}$

14)  $\frac{4}{10} < \frac{4}{5}$

19)  $\frac{1}{3} > \frac{1}{6}$

5)  $\frac{2}{4} > \frac{2}{5}$

10)  $\frac{2}{4} > \frac{2}{8}$

15)  $\frac{4}{6} < \frac{3}{4}$

20)  $\frac{2}{3} = \frac{4}{6}$

**Simplify these fractions**

21)  $\frac{24}{16} = 1\frac{1}{2}$

24)  $\frac{8}{20} = \frac{2}{5}$

27)  $\frac{25}{10} = 2\frac{1}{2}$

30)  $\frac{12}{18} = \frac{2}{3}$

22)  $\frac{26}{12} = 2\frac{1}{6}$

25)  $\frac{16}{10} = 1\frac{3}{5}$

28)  $\frac{4}{16} = \frac{1}{4}$

31)  $\frac{24}{32} = \frac{3}{4}$

23)  $\frac{14}{6} = 2\frac{1}{3}$

26)  $\frac{4}{12} = \frac{1}{3}$

29)  $\frac{2}{8} = \frac{1}{4}$

32)  $\frac{50}{30} = 1\frac{2}{3}$

**Multiplying fractions by whole numbers**

33)  $\frac{6}{8}$  of 16 = 12

37)  $\frac{1}{4}$  of 8 = 2

34)  $\frac{1}{4}$  of 20 = 5

38)  $\frac{4}{8}$  of 8 = 4

35)  $\frac{1}{5}$  of 15 = 3

39)  $\frac{3}{4}$  of 24 = 18

36)  $\frac{4}{9}$  of 9 = 4

40)  $\frac{1}{7}$  of 28 = 4

**Multiplying whole numbers by fractions**

41)  $24 \times \frac{3}{4} = 18$

45)  $40 \times \frac{2}{5} = 16$

42)  $10 \times \frac{6}{10} = 6$

46)  $35 \times \frac{3}{5} = 21$

43)  $40 \times \frac{1}{5} = 8$

47)  $10 \times \frac{6}{10} = 6$

44)  $10 \times \frac{7}{10} = 7$

48)  $24 \times \frac{2}{3} = 16$

**Revision**

49)  $7 + 5 = 12$

53)  $4 + 3 = 7$

57)  $7 - 3 = 4$

61)  $10 - 4 = 6$

50)  $8 + 4 = 12$

54)  $5 + 2 = 7$

58)  $8 - 4 = 4$

62)  $13 - 6 = 7$

51)  $5 + 5 = 10$

55)  $6 + 3 = 9$

59)  $10 - 1 = 9$

63)  $12 - 9 = 3$

52)  $6 + 4 = 10$

56)  $9 + 7 = 16$

60)  $14 - 5 = 9$

64)  $16 - 6 = 10$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Comparing Fractions: 5 [ C ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Comparing Fractions:**

Think about how many whole numbers are contained in each of the improper fractions. You may not need to convert the fractions at all if the two whole numbers tell you one number is larger.

For example:

$$\frac{13}{4} \square \frac{7}{6}$$

$$\frac{13}{4} = 3 \text{ wholes and a fraction}$$

$$\frac{7}{6} = 1 \text{ whole and a fraction, so it is obvious:}$$

$$\frac{13}{4} > \frac{7}{6}$$

**Insert <, > or =**

1)  $\frac{5}{3} < \frac{32}{10}$

6)  $\frac{2}{12} = \frac{1}{6}$

11)  $\frac{2}{3} > \frac{2}{5}$

16)  $\frac{1}{4} < \frac{3}{4}$

2)  $\frac{8}{3} > \frac{2}{6}$

7)  $\frac{8}{9} > \frac{4}{6}$

12)  $\frac{12}{3} = \frac{20}{5}$

17)  $\frac{3}{6} < \frac{3}{5}$

3)  $\frac{13}{6} > \frac{4}{3}$

8)  $\frac{10}{6} > \frac{13}{12}$

13)  $\frac{21}{10} > \frac{6}{5}$

18)  $\frac{11}{4} < \frac{16}{5}$

4)  $\frac{14}{6} > \frac{5}{8}$

9)  $\frac{10}{6} > \frac{4}{6}$

14)  $\frac{9}{4} > \frac{7}{6}$

19)  $\frac{3}{5} = \frac{6}{10}$

5)  $\frac{7}{3} < \frac{17}{5}$

10)  $\frac{6}{9} < \frac{8}{6}$

15)  $\frac{3}{4} > \frac{3}{5}$

20)  $\frac{3}{5} > \frac{1}{3}$

**Equivalent fractions**

21)  $\frac{3}{5} = \frac{15}{25}$

23)  $\frac{6}{8} = \frac{18}{24}$

25)  $\frac{3}{5} = \frac{21}{35}$

27)  $\frac{3}{5} = \frac{6}{10}$

22)  $\frac{1}{2} = \frac{6}{12}$

24)  $\frac{1}{2} = \frac{7}{14}$

26)  $\frac{5}{8} = \frac{35}{56}$

28)  $\frac{3}{4} = \frac{9}{12}$

**Multiplying fractions by whole numbers**

29)  $\frac{5}{7}$  of 35 = 25

31)  $\frac{5}{10}$  of 10 = 5

30)  $\frac{4}{9}$  of 9 = 4

32)  $\frac{1}{2}$  of 16 = 8

**Multiplying whole numbers by fractions**

33)  $32 \times \frac{1}{4} = 8$

35)  $24 \times \frac{3}{4} = 18$

34)  $36 \times \frac{4}{6} = 24$

36)  $30 \times \frac{2}{10} = 6$

**Improper Fractions to Mixed Numbers**

49)  $\frac{15}{4} = 3 \frac{3}{4}$

53)  $\frac{10}{3} = 3 \frac{1}{3}$

50)  $\frac{11}{2} = 5 \frac{1}{2}$

54)  $\frac{14}{2} = 7$

51)  $\frac{9}{8} = 1 \frac{1}{8}$

55)  $\frac{11}{5} = 2 \frac{1}{5}$

52)  $\frac{21}{5} = 4 \frac{1}{5}$

56)  $\frac{14}{4} = 3 \frac{2}{4}$

**Mixed Numbers to Improper Fractions**

57)  $5 \frac{1}{2} = \frac{11}{2}$

61)  $1 \frac{1}{4} = \frac{5}{4}$

58)  $3 = \frac{12}{4}$

62)  $2 \frac{4}{5} = \frac{14}{5}$

59)  $4 \frac{7}{10} = \frac{47}{10}$

63)  $2 \frac{2}{3} = \frac{8}{3}$

60)  $2 \frac{1}{8} = \frac{17}{8}$

64)  $3 = \frac{15}{5}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Comparing Fractions: 5 [ D ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Comparing Fractions:**

Comparing an improper fraction with a mixed number requires you to convert the improper to a mixed number before comparing. For example:

$$3\frac{2}{4} \square \frac{15}{4} \quad 3\frac{2}{4} \square \frac{15}{4} \quad 3\frac{3}{4} \quad \text{so} \quad 3\frac{2}{4} < 3\frac{3}{4}$$

Sometimes you may even need to find equivalent fractions as well before fractions can be compared.

For example:

$$2\frac{3}{4} \square \frac{16}{6} \quad \frac{9}{12} \quad 2\frac{8}{4} \square \frac{16}{6} \quad 2\frac{4}{6} \quad \frac{8}{12} \quad \text{so} \quad 2\frac{9}{12} > 2\frac{8}{12}$$

**Insert <, > or =**

1)  $2\frac{5}{9} > \frac{20}{9}$

6)  $\frac{2}{12} < \frac{2}{3}$

11)  $\frac{3}{5} > \frac{2}{4}$

16)  $\frac{2}{3} > \frac{2}{5}$

2)  $3\frac{2}{10} = \frac{32}{10}$

7)  $2\frac{1}{3} < \frac{21}{3}$

12)  $\frac{1}{3} > \frac{1}{4}$

17)  $2\frac{1}{4} < 2\frac{2}{3}$

3)  $\frac{20}{6} < 3\frac{3}{6}$

8)  $1\frac{4}{9} = \frac{13}{9}$

13)  $\frac{2}{4} > \frac{2}{6}$

18)  $1\frac{3}{6} < \frac{10}{6}$

4)  $\frac{4}{12} = \frac{1}{3}$

9)  $\frac{11}{3} > 3\frac{1}{3}$

14)  $\frac{2}{5} = \frac{6}{15}$

19)  $\frac{3}{5} < \frac{2}{3}$

5)  $\frac{7}{9} > \frac{4}{9}$

10)  $\frac{4}{6} > \frac{1}{6}$

15)  $2\frac{3}{4} < \frac{12}{4}$

20)  $\frac{4}{6} > \frac{1}{3}$

**Multiplying fractions by whole numbers**

21)  $\frac{1}{2}$  of 20 = 10

25)  $\frac{8}{9}$  of 9 = 8

22)  $\frac{2}{9}$  of 18 = 4

26)  $\frac{2}{8}$  of 40 = 10

23)  $\frac{2}{6}$  of 12 = 4

27)  $\frac{1}{4}$  of 20 = 5

24)  $\frac{2}{10}$  of 20 = 4

28)  $\frac{1}{3}$  of 15 = 5

**Multiplying whole numbers by fractions**

29)  $35 \times \frac{2}{7} = 10$

33)  $12 \times \frac{3}{4} = 9$

30)  $14 \times \frac{3}{7} = 6$

34)  $14 \times \frac{5}{7} = 10$

31)  $21 \times \frac{2}{3} = 14$

35)  $21 \times \frac{2}{3} = 14$

32)  $28 \times \frac{1}{4} = 7$

36)  $18 \times \frac{5}{6} = 15$

**Improper Fractions to Mixed Numbers**

49)  $\frac{15}{6} = 2\frac{3}{6}$

53)  $\frac{10}{6} = 1\frac{4}{6}$

50)  $\frac{10}{3} = 3\frac{1}{3}$

54)  $\frac{16}{5} = 3\frac{1}{5}$

51)  $\frac{17}{8} = 2\frac{1}{8}$

55)  $\frac{13}{8} = 1\frac{5}{8}$

52)  $\frac{21}{10} = 2\frac{1}{10}$

56)  $\frac{13}{2} = 6\frac{1}{2}$

**Mixed Numbers to Improper Fractions**

57)  $4\frac{1}{3} = \frac{13}{3}$

61)  $4\frac{4}{6} = \frac{28}{6}$

58)  $3 = \frac{9}{3}$

62)  $2\frac{4}{8} = \frac{20}{8}$

59)  $6\frac{1}{10} = \frac{61}{10}$

63)  $5\frac{2}{4} = \frac{22}{4}$

60)  $2\frac{5}{9} = \frac{23}{9}$

64)  $3 = \frac{12}{4}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Adding Fractions: 6 [A]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Adding Fractions with Common Denominators (horizontally):**

First check the denominators are the same.

Then add or subtract the numerators only. The denominators stay the same.

For example:  $\frac{5}{9} + \frac{2}{9} = \frac{7}{9}$

Change any improper fraction in the answer to a mixed number.

For example:  $\frac{6}{9} + \frac{5}{9} = \frac{11}{9} = 1\frac{2}{9}$

**Add the fractions**

1)  $\frac{2}{5} + \frac{2}{5} = \frac{4}{5}$

6)  $\frac{7}{10} + \frac{2}{10} = \frac{9}{10}$

11)  $\frac{2}{5} + \frac{4}{5} = 1\frac{1}{5}$

16)  $\frac{3}{5} + \frac{2}{5} = 1$

2)  $\frac{2}{12} + \frac{9}{12} = \frac{11}{12}$

7)  $\frac{1}{5} + \frac{1}{5} = \frac{2}{5}$

12)  $\frac{4}{5} + \frac{3}{5} = 1\frac{2}{5}$

17)  $\frac{9}{10} + \frac{1}{10} = 1$

3)  $\frac{1}{4} + \frac{2}{4} = \frac{3}{4}$

8)  $\frac{2}{5} + \frac{2}{5} = \frac{4}{5}$

13)  $\frac{2}{3} + \frac{1}{3} = 1$

18)  $\frac{1}{5} + \frac{2}{5} = \frac{3}{5}$

4)  $\frac{4}{8} + \frac{1}{8} = \frac{5}{8}$

9)  $\frac{3}{8} + \frac{4}{8} = \frac{7}{8}$

14)  $\frac{2}{12} + \frac{11}{12} = 1\frac{1}{12}$

19)  $\frac{5}{6} + \frac{4}{6} = 1\frac{1}{2}$

5)  $\frac{2}{9} + \frac{2}{9} = \frac{4}{9}$

10)  $\frac{4}{10} + \frac{2}{10} = \frac{3}{5}$

15)  $\frac{6}{9} + \frac{1}{9} = \frac{7}{9}$

20)  $\frac{7}{8} + \frac{6}{8} = 1\frac{5}{8}$

**Equivalent fractions**

21)  $\frac{1}{4} = \frac{3}{12}$

24)  $\frac{1}{2} = \frac{3}{6}$

27)  $\frac{6}{8} = \frac{18}{24}$

30)  $\frac{2}{3} = \frac{4}{6}$

22)  $\frac{3}{8} = \frac{21}{56}$

25)  $\frac{1}{3} = \frac{3}{9}$

28)  $\frac{1}{2} = \frac{10}{20}$

31)  $\frac{1}{3} = \frac{5}{15}$

23)  $\frac{1}{3} = \frac{9}{27}$

26)  $\frac{3}{6} = \frac{18}{36}$

29)  $\frac{3}{4} = \frac{15}{20}$

32)  $\frac{2}{8} = \frac{14}{56}$

**Multiplying fractions by whole numbers**

33)  $\frac{4}{9}$  of 45 = 20

37)  $\frac{1}{2}$  of 16 = 8

34)  $\frac{2}{3}$  of 3 = 2

38)  $\frac{1}{2}$  of 38 = 19

35)  $\frac{5}{8}$  of 32 = 20

39)  $\frac{1}{6}$  of 42 = 7

36)  $\frac{1}{4}$  of 28 = 7

40)  $\frac{2}{8}$  of 16 = 4

**Multiplying whole numbers by fractions**

41)  $36 \times \frac{3}{4} = 27$

45)  $20 \times \frac{5}{10} = 10$

42)  $7 \times \frac{4}{7} = 4$

46)  $42 \times \frac{5}{7} = 30$

43)  $9 \times \frac{1}{9} = 1$

47)  $27 \times \frac{2}{9} = 6$

44)  $20 \times \frac{6}{10} = 12$

48)  $15 \times \frac{3}{5} = 9$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Adding Fractions: 6 [ B ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Adding Fractions with Common Denominators (vertically):**

The addition of fractions can also be written horizontally.

For example:

$$\begin{array}{r} \frac{5}{8} \\ + \frac{2}{8} \\ \hline \frac{7}{8} \end{array} \quad \begin{array}{r} \frac{6}{9} \\ + \frac{7}{9} \\ \hline \frac{13}{9} = 1\frac{4}{9} \end{array}$$

**Add the fractions (vertically)**

$$\begin{array}{l} 1) \quad \frac{5}{10} \\ + \frac{2}{10} \\ \hline \frac{7}{10} \end{array} \quad \begin{array}{l} 3) \quad \frac{2}{6} \\ + \frac{3}{6} \\ \hline \frac{5}{6} \end{array} \quad \begin{array}{l} 5) \quad \frac{1}{12} \\ + \frac{3}{12} \\ \hline \frac{4}{12} = \frac{1}{3} \end{array} \quad \begin{array}{l} 7) \quad \frac{7}{12} \\ + \frac{6}{12} \\ \hline \frac{13}{12} = 1\frac{1}{12} \end{array} \quad \begin{array}{l} 9) \quad \frac{6}{8} \\ + \frac{5}{8} \\ \hline \frac{11}{8} = 1\frac{3}{8} \end{array} \quad \begin{array}{l} 11) \quad \frac{4}{10} \\ + \frac{7}{10} \\ \hline \frac{11}{10} = 1\frac{1}{10} \end{array}$$

$$\begin{array}{l} 2) \quad \frac{1}{3} \\ + \frac{1}{3} \\ \hline \frac{2}{3} \end{array} \quad \begin{array}{l} 4) \quad \frac{1}{10} \\ + \frac{8}{10} \\ \hline \frac{9}{10} \end{array} \quad \begin{array}{l} 6) \quad \frac{6}{10} \\ + \frac{3}{10} \\ \hline \frac{9}{10} \end{array} \quad \begin{array}{l} 8) \quad \frac{8}{9} \\ + \frac{6}{9} \\ \hline \frac{14}{9} = 1\frac{5}{9} \end{array} \quad \begin{array}{l} 10) \quad \frac{4}{9} \\ + \frac{7}{9} \\ \hline \frac{11}{9} = 1\frac{2}{9} \end{array} \quad \begin{array}{l} 12) \quad \frac{3}{8} \\ + \frac{6}{8} \\ \hline \frac{9}{8} = 1\frac{1}{8} \end{array}$$

**Add the fractions (horizontally)**

$$\begin{array}{l} 13) \quad \frac{6}{10} + \frac{1}{10} = \frac{7}{10} \\ 14) \quad \frac{1}{4} + \frac{3}{4} = 1 \\ 15) \quad \frac{6}{10} + \frac{7}{10} = 1\frac{3}{10} \end{array} \quad \begin{array}{l} 16) \quad \frac{2}{3} + \frac{1}{3} = 1 \\ 17) \quad \frac{5}{6} + \frac{4}{6} = 1\frac{1}{2} \\ 18) \quad \frac{1}{4} + \frac{2}{4} = \frac{3}{4} \end{array} \quad \begin{array}{l} 19) \quad \frac{3}{6} + \frac{3}{6} = 1 \\ 20) \quad \frac{7}{12} + \frac{7}{12} = 1\frac{1}{6} \\ 21) \quad \frac{9}{10} + \frac{6}{10} = 1\frac{1}{2} \end{array} \quad \begin{array}{l} 22) \quad \frac{1}{3} + \frac{2}{3} = 1 \\ 23) \quad \frac{8}{9} + \frac{6}{9} = 1\frac{5}{9} \\ 24) \quad \frac{4}{10} + \frac{5}{10} = \frac{9}{10} \end{array}$$

**Equivalent fractions**

$$\begin{array}{l} 25) \quad \frac{2}{4} = \frac{18}{36} \\ 26) \quad \frac{2}{5} = \frac{8}{20} \\ 27) \quad \frac{5}{8} = \frac{50}{80} \end{array} \quad \begin{array}{l} 28) \quad \frac{3}{6} = \frac{30}{60} \\ 29) \quad \frac{1}{6} = \frac{7}{42} \\ 30) \quad \frac{2}{4} = \frac{10}{20} \end{array} \quad \begin{array}{l} 31) \quad \frac{1}{3} = \frac{5}{15} \\ 32) \quad \frac{2}{4} = \frac{6}{12} \\ 33) \quad \frac{4}{6} = \frac{12}{18} \end{array} \quad \begin{array}{l} 34) \quad \frac{2}{3} = \frac{8}{12} \\ 35) \quad \frac{1}{3} = \frac{3}{9} \\ 36) \quad \frac{1}{2} = \frac{10}{20} \end{array}$$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Adding &amp; Subtracting Fractions: 6 [ C ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Subtracting Fractions with Common Denominators (horizontally):**

First check the denominators are the same.

Then subtract the numerators only. The denominators stay the same.

For example:

$$\frac{6}{8} - \frac{2}{8} = \frac{4}{8}$$

When subtracting, change the mixed number (single one) to an improper fraction where necessary before commencing.

For example:

$$1\frac{4}{8} - \frac{7}{8} = \frac{12}{8} - \frac{7}{8} = \frac{5}{8}$$

**Subtract the fractions**

1)  $\frac{7}{8} - \frac{5}{8} = \frac{1}{4}$

6)  $\frac{9}{12} - \frac{5}{12} = \frac{1}{3}$

2)  $\frac{3}{6} - \frac{1}{6} = \frac{1}{3}$

7)  $\frac{2}{3} - \frac{1}{3} = \frac{1}{3}$

3)  $\frac{7}{10} - \frac{5}{10} = \frac{1}{5}$

8)  $\frac{9}{10} - \frac{4}{10} = \frac{1}{2}$

4)  $\frac{9}{10} - \frac{8}{10} = \frac{1}{10}$

9)  $\frac{6}{8} - \frac{5}{8} = \frac{1}{8}$

5)  $\frac{8}{10} - \frac{3}{10} = \frac{1}{2}$

10)  $\frac{5}{6} - \frac{4}{6} = \frac{1}{6}$

**Subtract the fractions (change to improper fractions where necessary)**

11)  $1\frac{2}{8} - \frac{3}{8} = \frac{7}{8}$

12)  $1\frac{2}{6} - \frac{4}{6} = \frac{2}{3}$

13)  $1\frac{2}{10} - \frac{5}{10} = \frac{7}{10}$

14)  $1\frac{4}{10} - \frac{6}{10} = \frac{4}{5}$

15)  $1\frac{1}{3} - \frac{2}{3} = \frac{2}{3}$

**Multiplying fractions by whole numbers**

16)  $\frac{3}{4}$  of 12 = 9

19)  $\frac{5}{10}$  of 30 = 15

17)  $\frac{3}{8}$  of 16 = 6

20)  $\frac{2}{5}$  of 45 = 18

18)  $\frac{2}{5}$  of 40 = 16

21)  $\frac{4}{6}$  of 24 = 16

**Multiplying whole numbers by fractions**

22)  $30 \times \frac{9}{10} = 27$

25)  $25 \times \frac{2}{5} = 10$

23)  $27 \times \frac{7}{9} = 21$

26)  $40 \times \frac{3}{8} = 15$

24)  $36 \times \frac{4}{6} = 24$

27)  $27 \times \frac{6}{9} = 18$

**Equivalent fractions**

28)  $\frac{5}{6} = \frac{45}{54}$

31)  $\frac{1}{3} = \frac{3}{9}$

34)  $\frac{4}{8} = \frac{20}{40}$

37)  $\frac{1}{4} = \frac{3}{12}$

29)  $\frac{5}{8} = \frac{40}{64}$

32)  $\frac{3}{6} = \frac{21}{42}$

35)  $\frac{2}{5} = \frac{10}{25}$

38)  $\frac{1}{2} = \frac{9}{18}$

30)  $\frac{1}{5} = \frac{4}{20}$

33)  $\frac{1}{2} = \frac{3}{6}$

36)  $\frac{1}{2} = \frac{4}{8}$

39)  $\frac{2}{8} = \frac{4}{16}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Adding &amp; Subtracting Fractions: 6 [ D ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Subtracting Fractions with Common Denominators (vertically):**

The subtraction of fractions can be written vertically.

For example:

$$\begin{array}{r} \frac{7}{9} \\ - \frac{5}{9} \\ \hline \frac{2}{9} \end{array}$$

$$\begin{array}{r} 1\frac{3}{9} - \frac{12}{9} \\ - \frac{7}{9} \\ \hline \frac{5}{9} \end{array}$$

**Subtract the fractions**

$$\begin{array}{l} 1) \quad \frac{7}{8} \\ - \frac{4}{8} \\ \hline \frac{3}{8} \end{array}$$

$$\begin{array}{l} 3) \quad \frac{2}{3} \\ - \frac{1}{3} \\ \hline \frac{1}{3} \end{array}$$

$$\begin{array}{l} 5) \quad \frac{4}{8} \\ - \frac{2}{8} \\ \hline \frac{1}{4} \end{array}$$

$$\begin{array}{l} 2) \quad \frac{2}{8} \\ - \frac{1}{8} \\ \hline \frac{1}{8} \end{array}$$

$$\begin{array}{l} 4) \quad \frac{4}{5} \\ - \frac{1}{5} \\ \hline \frac{3}{5} \end{array}$$

$$\begin{array}{l} 6) \quad \frac{2}{12} \\ - \frac{1}{12} \\ \hline \frac{1}{12} \end{array}$$

**Subtract the fractions (change to improper fractions where necessary)**

$$\begin{array}{l} 7) \quad 1\frac{1}{3} \\ - \frac{2}{3} \\ \hline \frac{2}{3} \end{array}$$

$$\begin{array}{l} 9) \quad 1\frac{2}{4} \\ - \frac{3}{4} \\ \hline \frac{3}{4} \end{array}$$

$$\begin{array}{l} 11) \quad 1\frac{2}{12} \\ - \frac{4}{12} \\ \hline \frac{5}{6} \end{array}$$

$$\begin{array}{l} 8) \quad 1\frac{2}{4} \\ - \frac{3}{4} \\ \hline \frac{3}{4} \end{array}$$

$$\begin{array}{l} 10) \quad 1\frac{4}{10} \\ - \frac{7}{10} \\ \hline \frac{7}{10} \end{array}$$

$$\begin{array}{l} 12) \quad 1\frac{3}{5} \\ - \frac{4}{5} \\ \hline \frac{4}{5} \end{array}$$

**Simplify these fractions**

$$13) \quad \frac{15}{25} = \frac{3}{5}$$

$$16) \quad \frac{14}{35} = \frac{2}{5}$$

$$14) \quad \frac{30}{25} = 1\frac{1}{5}$$

$$17) \quad \frac{4}{10} = \frac{2}{5}$$

$$15) \quad \frac{12}{18} = \frac{2}{3}$$

$$18) \quad \frac{60}{40} = 1\frac{1}{2}$$

**Multiplying whole numbers by fractions**

$$19) \quad 30 \times \frac{6}{10} = 18$$

$$22) \quad 8 \times \frac{3}{4} = 6$$

$$20) \quad 24 \times \frac{3}{6} = 12$$

$$23) \quad 14 \times \frac{4}{7} = 8$$

$$21) \quad 12 \times \frac{4}{6} = 8$$

$$24) \quad 21 \times \frac{2}{7} = 6$$

**Insert <, > or =**

$$25) \quad \frac{1}{6} < \frac{5}{12}$$

$$29) \quad \frac{5}{9} < \frac{9}{12}$$

$$33) \quad \frac{1}{4} < \frac{2}{6}$$

$$37) \quad \frac{3}{4} > \frac{2}{3}$$

$$26) \quad \frac{2}{12} < \frac{5}{6}$$

$$30) \quad \frac{5}{6} > \frac{3}{9}$$

$$34) \quad \frac{4}{6} > \frac{2}{6}$$

$$38) \quad \frac{2}{3} > \frac{3}{5}$$

$$27) \quad \frac{6}{12} > \frac{2}{9}$$

$$31) \quad \frac{4}{9} > \frac{2}{9}$$

$$35) \quad \frac{1}{3} < \frac{4}{5}$$

$$39) \quad \frac{3}{6} > \frac{1}{3}$$

$$28) \quad \frac{2}{9} < \frac{4}{9}$$

$$32) \quad \frac{6}{9} = \frac{4}{6}$$

$$36) \quad \frac{5}{6} > \frac{2}{5}$$

$$40) \quad \frac{2}{4} = \frac{4}{8}$$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Adding Mixed Numbers: 7 [A]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Adding Mixed Numbers:**

The addition of mixed numbers should be written vertically.

For example:

$$\begin{array}{r} 3\frac{1}{5} \\ + 2\frac{3}{5} \\ \hline 5\frac{4}{5} \end{array}$$

...and with regrouping:

$$\begin{array}{r} 2\frac{4}{5} \\ + 3\frac{3}{5} \\ \hline \cancel{5}\frac{7}{5} 6\frac{2}{5} \end{array}$$

**Add the fractions**

$$\begin{array}{r} 1) \quad 2\frac{3}{8} \\ + 5\frac{6}{8} \\ \hline 8\frac{1}{8} \end{array}$$

$$\begin{array}{r} 3) \quad 4\frac{5}{6} \\ + 3\frac{2}{6} \\ \hline 8\frac{1}{6} \end{array}$$

$$\begin{array}{r} 5) \quad 3\frac{2}{4} \\ + 4\frac{3}{4} \\ \hline 8\frac{1}{4} \end{array}$$

$$\begin{array}{r} 7) \quad 3\frac{5}{10} \\ + 5\frac{6}{10} \\ \hline 9\frac{1}{10} \end{array}$$

$$\begin{array}{r} 2) \quad 3\frac{5}{6} \\ + 4\frac{1}{6} \\ \hline 8 \end{array}$$

$$\begin{array}{r} 4) \quad 4\frac{4}{5} \\ + 4\frac{3}{5} \\ \hline 9\frac{2}{5} \end{array}$$

$$\begin{array}{r} 6) \quad 1\frac{2}{10} \\ + 1\frac{5}{10} \\ \hline 2\frac{7}{10} \end{array}$$

$$\begin{array}{r} 8) \quad 2\frac{7}{9} \\ + 4\frac{3}{9} \\ \hline 7\frac{1}{9} \end{array}$$

**Equivalent fractions**

$$9) \quad \frac{6}{8} = \frac{30}{40}$$

$$11) \quad \frac{1}{2} = \frac{2}{4}$$

$$13) \quad \frac{1}{4} = \frac{4}{16} = \frac{2}{8}$$

$$15) \quad \frac{2}{5} = \frac{20}{50} = \frac{6}{15}$$

$$10) \quad \frac{5}{6} = \frac{30}{36}$$

$$12) \quad \frac{2}{3} = \frac{10}{15}$$

$$14) \quad \frac{1}{3} = \frac{2}{6} = \frac{4}{12}$$

$$16) \quad \frac{2}{3} = \frac{18}{27} = \frac{6}{9}$$

**Multiplying fractions by whole numbers**

$$17) \quad \frac{4}{6} \text{ of } 30 = 20$$

$$21) \quad \frac{3}{5} \text{ of } 10 = 6$$

$$18) \quad \frac{2}{5} \text{ of } 25 = 10$$

$$22) \quad \frac{2}{5} \text{ of } 30 = 12$$

$$19) \quad \frac{2}{7} \text{ of } 28 = 8$$

$$23) \quad \frac{2}{3} \text{ of } 15 = 10$$

$$20) \quad \frac{1}{4} \text{ of } 48 = 12$$

$$24) \quad \frac{4}{6} \text{ of } 24 = 16$$

**Multiplying whole numbers by fractions**

$$25) \quad 32 \times \frac{1}{4} = 8$$

$$29) \quad 12 \times \frac{4}{6} = 8$$

$$26) \quad 24 \times \frac{1}{4} = 6$$

$$30) \quad 30 \times \frac{1}{5} = 6$$

$$27) \quad 28 \times \frac{2}{7} = 8$$

$$31) \quad 24 \times \frac{3}{4} = 18$$

$$28) \quad 18 \times \frac{1}{2} = 9$$

$$32) \quad 21 \times \frac{5}{7} = 15$$

**Insert <, > or =**

$$33) \quad \frac{1}{6} < \frac{5}{9}$$

$$35) \quad \frac{2}{3} > \frac{1}{3}$$

$$37) \quad \frac{1}{4} < \frac{2}{4}$$

$$39) \quad \frac{3}{5} > \frac{1}{6}$$

$$34) \quad \frac{3}{12} < \frac{4}{9}$$

$$36) \quad \frac{1}{6} < \frac{6}{9}$$

$$38) \quad \frac{1}{4} < \frac{3}{6}$$

$$40) \quad \frac{3}{9} < \frac{4}{6}$$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Adding Mixed Numbers: 7 [ B ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Add the fractions**

$$\begin{array}{r} 1) \quad 2\frac{2}{3} \\ + \quad 3\frac{2}{3} \\ \hline 6\frac{1}{3} \end{array}$$

$$\begin{array}{r} 4) \quad 2\frac{1}{6} \\ + \quad 3\frac{4}{6} \\ \hline 5\frac{5}{6} \end{array}$$

$$\begin{array}{r} 7) \quad 5\frac{1}{4} \\ + \quad 3\frac{2}{4} \\ \hline 8\frac{3}{4} \end{array}$$

$$\begin{array}{r} 10) \quad 3\frac{5}{6} \\ + \quad 1\frac{1}{6} \\ \hline 5 \end{array}$$

$$\begin{array}{r} 2) \quad 2\frac{6}{10} \\ + \quad 4\frac{5}{10} \\ \hline 7\frac{1}{10} \end{array}$$

$$\begin{array}{r} 5) \quad 2\frac{5}{12} \\ + \quad 2\frac{9}{12} \\ \hline 5\frac{1}{6} \end{array}$$

$$\begin{array}{r} 8) \quad 3\frac{4}{10} \\ + \quad 3\frac{6}{10} \\ \hline 7 \end{array}$$

$$\begin{array}{r} 11) \quad 2\frac{3}{5} \\ + \quad 3\frac{4}{5} \\ \hline 6\frac{2}{5} \end{array}$$

$$\begin{array}{r} 3) \quad 1\frac{2}{9} \\ + \quad 1\frac{5}{9} \\ \hline 2\frac{7}{9} \end{array}$$

$$\begin{array}{r} 6) \quad 1\frac{7}{8} \\ + \quad 7\frac{4}{8} \\ \hline 9\frac{3}{8} \end{array}$$

$$\begin{array}{r} 9) \quad 4\frac{3}{4} \\ + \quad 3\frac{3}{4} \\ \hline 8\frac{1}{2} \end{array}$$

$$\begin{array}{r} 12) \quad 7\frac{2}{10} \\ + \quad 1\frac{8}{10} \\ \hline 9 \end{array}$$

**Equivalent fractions**

$$13) \quad \frac{2}{3} = \frac{4}{6}$$

$$15) \quad \frac{1}{5} = \frac{6}{30}$$

$$17) \quad \frac{4}{5} = \frac{24}{30}$$

$$19) \quad \frac{1}{2} = \frac{7}{14}$$

$$14) \quad \frac{1}{6} = \frac{7}{42}$$

$$16) \quad \frac{1}{2} = \frac{3}{6}$$

$$18) \quad \frac{2}{5} = \frac{16}{40}$$

$$20) \quad \frac{6}{8} = \frac{36}{48}$$

**Multiplying fractions by whole numbers**

$$21) \quad \frac{2}{5} \text{ of } 30 = 12$$

$$24) \quad \frac{3}{4} \text{ of } 8 = 6$$

$$22) \quad \frac{4}{5} \text{ of } 40 = 32$$

$$25) \quad \frac{2}{9} \text{ of } 45 = 10$$

$$23) \quad \frac{2}{3} \text{ of } 27 = 18$$

$$26) \quad \frac{5}{10} \text{ of } 40 = 20$$

**Multiplying whole numbers by fractions**

$$27) \quad 40 \times \frac{2}{4} = 20$$

$$30) \quad 48 \times \frac{5}{6} = 40$$

$$28) \quad 20 \times \frac{8}{10} = 16$$

$$31) \quad 30 \times \frac{3}{6} = 15$$

$$29) \quad 24 \times \frac{3}{8} = 9$$

$$32) \quad 12 \times \frac{1}{2} = 6$$

**Insert <, > or =**

$$33) \quad \frac{3}{9} > \frac{1}{12}$$

$$36) \quad \frac{2}{9} < \frac{3}{9}$$

$$39) \quad \frac{3}{6} < \frac{2}{3}$$

$$42) \quad \frac{1}{4} < \frac{4}{5}$$

$$34) \quad \frac{2}{3} > \frac{6}{12}$$

$$37) \quad \frac{1}{3} < \frac{5}{6}$$

$$40) \quad \frac{2}{4} > \frac{1}{4}$$

$$43) \quad \frac{3}{5} = \frac{6}{10}$$

$$35) \quad \frac{1}{9} < \frac{1}{3}$$

$$38) \quad \frac{4}{6} = \frac{6}{9}$$

$$41) \quad \frac{2}{3} > \frac{2}{4}$$

$$44) \quad \frac{1}{3} = \frac{1}{3}$$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Subtracting Mixed Numbers: 7 [ C ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Subtracting Mixed Numbers:**

The subtraction of mixed numbers should be written vertically.

For example:

$$\begin{array}{r} 4\frac{3}{4} \\ - 2\frac{3}{5} \\ \hline 5\frac{4}{5} \end{array}$$

...and with regrouping:

$$\begin{array}{r} 5\cancel{2}\frac{8}{6} \quad 4\frac{8}{5} \\ + 3\frac{3}{6} \\ \hline 1\frac{5}{6} \end{array}$$

**Subtract the fractions**

$$\begin{array}{r} 1) \quad 5\frac{3}{4} \\ - 3\frac{2}{4} \\ \hline 2\frac{1}{4} \end{array}$$

$$\begin{array}{r} 3) \quad 7\frac{2}{4} \\ - 4\frac{3}{4} \\ \hline 2\frac{3}{4} \end{array}$$

$$\begin{array}{r} 5) \quad 4\frac{2}{4} \\ - 3\frac{3}{4} \\ \hline \frac{3}{4} \end{array}$$

$$\begin{array}{r} 7) \quad 7\frac{2}{4} \\ - 4\frac{3}{4} \\ \hline 2\frac{3}{4} \end{array}$$

$$\begin{array}{r} 2) \quad 5\frac{1}{12} \\ - 3\frac{10}{12} \\ \hline 1\frac{1}{4} \end{array}$$

$$\begin{array}{r} 4) \quad 9\frac{4}{10} \\ - 6\frac{7}{10} \\ \hline 2\frac{7}{10} \end{array}$$

$$\begin{array}{r} 6) \quad 5\frac{3}{12} \\ - 3\frac{10}{12} \\ \hline 1\frac{5}{12} \end{array}$$

$$\begin{array}{r} 8) \quad 9\frac{4}{10} \\ - 6\frac{7}{10} \\ \hline 2\frac{7}{10} \end{array}$$

**Equivalent fractions**

$$9) \quad \frac{3}{5} = \frac{21}{35}$$

$$11) \quad \frac{1}{6} = \frac{9}{54}$$

$$13) \quad \frac{2}{6} = \frac{20}{60} = \frac{4}{12}$$

$$15) \quad \frac{1}{5} = \frac{4}{20} = \frac{9}{45}$$

$$10) \quad \frac{1}{5} = \frac{2}{10}$$

$$12) \quad \frac{2}{3} = \frac{14}{21}$$

$$14) \quad \frac{1}{6} = \frac{2}{12} = \frac{3}{18}$$

$$16) \quad \frac{1}{2} = \frac{5}{10} = \frac{10}{20}$$

**Multiplying fractions by whole numbers**

$$17) \quad \frac{1}{7} \text{ of } 21 = 3$$

$$21) \quad \frac{1}{8} \text{ of } 24 = 3$$

$$18) \quad \frac{2}{4} \text{ of } 24 = 12$$

$$22) \quad \frac{1}{8} \text{ of } 16 = 2$$

$$19) \quad \frac{2}{5} \text{ of } 30 = 12$$

$$23) \quad \frac{7}{10} \text{ of } 10 = 7$$

$$20) \quad \frac{1}{2} \text{ of } 18 = 9$$

$$24) \quad \frac{1}{5} \text{ of } 45 = 9$$

**Multiplying whole numbers by fractions**

$$25) \quad 30 \times \frac{2}{6} = 10$$

$$29) \quad 48 \times \frac{3}{8} = 18$$

$$26) \quad 20 \times \frac{5}{10} = 10$$

$$30) \quad 10 \times \frac{6}{10} = 6$$

$$27) \quad 16 \times \frac{5}{8} = 10$$

$$31) \quad 20 \times \frac{1}{4} = 5$$

$$28) \quad 42 \times \frac{3}{6} = 21$$

$$32) \quad 10 \times \frac{4}{5} = 8$$

**Insert <, > or =**

$$33) \quad \frac{2}{6} < \frac{7}{12}$$

$$35) \quad \frac{15}{6} > 2\frac{2}{6}$$

$$37) \quad \frac{2}{5} < \frac{2}{3}$$

$$39) \quad \frac{1}{4} < \frac{2}{3}$$

$$34) \quad \frac{1}{3} < \frac{3}{6}$$

$$36) \quad \frac{7}{12} > \frac{1}{6}$$

$$38) \quad 3\frac{2}{5} > \frac{16}{5}$$

$$40) \quad \frac{3}{5} > \frac{1}{6}$$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Subtracting Mixed Numbers: 7 [ D ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Subtract the fractions**

$$\begin{array}{r} 1) \quad 2\frac{3}{8} \\ - 1\frac{6}{8} \\ \hline 1\frac{5}{8} \end{array}$$

$$\begin{array}{r} 4) \quad 4\frac{4}{12} \\ - 2\frac{11}{12} \\ \hline 1\frac{5}{12} \end{array}$$

$$\begin{array}{r} 7) \quad 5\frac{1}{3} \\ - 2\frac{2}{3} \\ \hline 2\frac{2}{3} \end{array}$$

$$\begin{array}{r} 10) \quad 6\frac{1}{10} \\ - 4\frac{8}{10} \\ \hline 1\frac{3}{10} \end{array}$$

$$\begin{array}{r} 2) \quad 8\frac{2}{6} \\ - 7\frac{1}{6} \\ \hline 1\frac{1}{6} \end{array}$$

$$\begin{array}{r} 5) \quad 9\frac{2}{4} \\ - 5\frac{3}{4} \\ \hline 3\frac{3}{4} \end{array}$$

$$\begin{array}{r} 8) \quad 7\frac{2}{5} \\ - 1\frac{3}{5} \\ \hline 5\frac{4}{5} \end{array}$$

$$\begin{array}{r} 11) \quad 9\frac{1}{3} \\ - 1\frac{2}{3} \\ \hline 7\frac{2}{3} \end{array}$$

$$\begin{array}{r} 3) \quad 9\frac{2}{4} \\ - 7\frac{3}{4} \\ \hline 1\frac{3}{4} \end{array}$$

$$\begin{array}{r} 6) \quad 5\frac{5}{6} \\ - 1\frac{4}{6} \\ \hline 4\frac{1}{6} \end{array}$$

$$\begin{array}{r} 9) \quad 2\frac{2}{4} \\ - 1\frac{3}{4} \\ \hline \frac{3}{4} \end{array}$$

$$\begin{array}{r} 12) \quad 7\frac{1}{5} \\ - 4\frac{4}{5} \\ \hline 2\frac{2}{5} \end{array}$$

**Equivalent fractions**

$$13) \quad \frac{1}{2} = \frac{8}{16}$$

$$15) \quad \frac{4}{5} = \frac{8}{10}$$

$$17) \quad \frac{3}{4} = \frac{27}{36}$$

$$19) \quad \frac{2}{3} = \frac{4}{6}$$

$$14) \quad \frac{1}{2} = \frac{5}{10}$$

$$16) \quad \frac{3}{6} = \frac{18}{36}$$

$$18) \quad \frac{1}{3} = \frac{5}{15}$$

$$20) \quad \frac{2}{3} = \frac{6}{9}$$

**Multiplying fractions by whole numbers**

$$21) \quad \frac{6}{9} \text{ of } 27 = 18$$

$$25) \quad \frac{2}{7} \text{ of } 14 = 4$$

$$22) \quad \frac{5}{9} \text{ of } 45 = 25$$

$$26) \quad \frac{4}{9} \text{ of } 36 = 16$$

$$23) \quad \frac{7}{9} \text{ of } 9 = 7$$

$$27) \quad \frac{2}{5} \text{ of } 5 = 2$$

$$24) \quad \frac{1}{4} \text{ of } 36 = 9$$

$$28) \quad \frac{3}{7} \text{ of } 42 = 18$$

**Multiplying whole numbers by fractions**

$$29) \quad 42 \times \frac{6}{7} = 36$$

$$33) \quad 30 \times \frac{2}{10} = 6$$

$$30) \quad 45 \times \frac{3}{5} = 27$$

$$34) \quad 28 \times \frac{1}{4} = 7$$

$$31) \quad 30 \times \frac{1}{5} = 6$$

$$35) \quad 8 \times \frac{6}{8} = 6$$

$$32) \quad 15 \times \frac{3}{5} = 9$$

$$36) \quad 7 \times \frac{1}{7} = 1$$

**Insert <, > or =**

$$37) \quad 2\frac{2}{4} = \frac{10}{4}$$

$$40) \quad \frac{13}{6} = 2\frac{1}{6}$$

$$43) \quad 4\frac{1}{6} > \frac{24}{6}$$

$$46) \quad \frac{15}{4} = 3\frac{3}{4}$$

$$38) \quad 1\frac{2}{9} = \frac{11}{9}$$

$$41) \quad \frac{1}{3} > \frac{2}{12}$$

$$44) \quad \frac{3}{6} = \frac{2}{4}$$

$$47) \quad \frac{4}{6} < \frac{3}{4}$$

$$39) \quad 3\frac{2}{9} > \frac{28}{9}$$

$$42) \quad 3\frac{1}{3} < \frac{11}{3}$$

$$45) \quad \frac{1}{4} < \frac{1}{3}$$

$$48) \quad \frac{2}{3} > \frac{1}{5}$$

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Name: \_\_\_\_\_ Score: \_\_\_\_\_ Converting Decimals to Common Fractions: 8 [A]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Converting Decimal Fractions to Common Fractions or Mixed Numbers:**

It is important to look at the places shown by each decimal. If only the tenths place is shown then use 10 as the denominator; if hundredths, then use 100 as the denominator.

0.4 is 4 tenths  $0.4 = \frac{4}{10}$

0.36 is 36 hundredths  $0.36 = \frac{36}{100}$

2.5 is 2 and 5 tenths  $2.5 = 2\frac{5}{10}$

6.78 is 6 and 78 hundredths  $6.78 = 6\frac{78}{100}$

**Convert decimals to common fractions**

1)  $0.54 = \frac{54}{100}$

6)  $0.71 = \frac{71}{100}$

2)  $0.8 = \frac{8}{10}$

7)  $0.1 = \frac{1}{10}$

3)  $0.03 = \frac{3}{100}$

8)  $0.92 = \frac{92}{100}$

4)  $0.4 = \frac{4}{10}$

9)  $0.7 = \frac{7}{10}$

5)  $0.09 = \frac{9}{100}$

10)  $0.2 = \frac{2}{10}$

**Convert decimals to mixed numbers**

11)  $1.54 = 1\frac{54}{100}$

16)  $4.71 = 4\frac{71}{100}$

12)  $3.8 = 3\frac{8}{10}$

17)  $0.1 = \frac{1}{10}$

13)  $5.03 = 5\frac{3}{100}$

18)  $9.92 = 9\frac{92}{100}$

14)  $4.4 = 4\frac{4}{10}$

19)  $5.7 = 5\frac{7}{10}$

15)  $3.09 = 3\frac{9}{100}$

20)  $7.2 = 7\frac{2}{10}$

**Equivalent fractions**

21)  $\frac{1}{5} = \frac{2}{10}$

23)  $\frac{3}{5} = \frac{9}{15}$

25)  $\frac{4}{5} = \frac{24}{30}$

27)  $\frac{1}{2} = \frac{7}{14}$

22)  $\frac{1}{2} = \frac{6}{12}$

24)  $\frac{2}{3} = \frac{14}{21}$

26)  $\frac{2}{5} = \frac{16}{40}$

28)  $\frac{6}{8} = \frac{36}{48}$

**Multiply fractions by whole numbers**

29)  $\frac{3}{4}$  of 12 = 9

33)  $\frac{1}{10}$  of 30 = 3

30)  $\frac{3}{7}$  of 35 = 15

34)  $\frac{4}{7}$  of 7 = 4

31)  $\frac{6}{8}$  of 16 = 12

35)  $\frac{4}{9}$  of 27 = 12

32)  $\frac{2}{9}$  of 45 = 10

36)  $\frac{1}{3}$  of 27 = 9

**Multiply whole numbers by fractions**

37)  $34 \times \frac{2}{6} = 11\frac{1}{3}$

41)  $24 \times \frac{5}{8} = 15$

38)  $36 \times \frac{1}{4} = 9$

42)  $8 \times \frac{3}{4} = 6$

39)  $27 \times \frac{6}{9} = 18$

43)  $40 \times \frac{3}{10} = 12$

40)  $40 \times \frac{6}{8} = 30$

44)  $10 \times \frac{3}{5} = 6$

**Insert <, > or =**

45)  $\frac{2}{12} < \frac{1}{3}$

47)  $\frac{4}{3} = 1\frac{1}{3}$

49)  $2\frac{1}{3} = \frac{7}{3}$

51)  $\frac{1}{3} = \frac{2}{6}$

46)  $\frac{3}{6} > \frac{2}{9}$

48)  $1\frac{2}{9} < \frac{12}{9}$

50)  $\frac{3}{6} > \frac{1}{5}$

52)  $\frac{13}{5} > \frac{1}{4}$

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Name: \_\_\_\_\_ Score: \_\_\_\_\_ Converting Decimals to Common Fractions: 8 [ B ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	<b>decimals</b>	revision

**Convert decimals to common fractions**

- 1)  $0.08 = \frac{8}{100}$       6)  $0.1 = \frac{10}{100}$   
 2)  $0.23 = \frac{23}{100}$       7)  $0.21 = \frac{21}{100}$   
 3)  $0.6 = \frac{6}{10}$       8)  $0.4 = \frac{4}{10}$   
 4)  $0.72 = \frac{72}{100}$       9)  $0.24 = \frac{24}{100}$   
 5)  $0.9 = \frac{9}{10}$       10)  $0.73 = \frac{73}{100}$

**Convert decimals to mixed numbers**

- 11)  $5.08 = 5\frac{8}{100}$       16)  $2.1 = 2\frac{10}{100}$   
 12)  $8.23 = 8\frac{23}{100}$       17)  $9.21 = 9\frac{21}{100}$   
 13)  $7.59 = 7\frac{59}{100}$       18)  $7.41 = 7\frac{41}{100}$   
 14)  $4.57 = 4\frac{57}{100}$       19)  $7.7 = 7\frac{7}{10}$   
 15)  $1.24 = 1\frac{24}{100}$       20)  $4.9 = 4\frac{9}{10}$

**Multiply fractions by whole numbers**

- 21)  $\frac{2}{10}$  of 10 = 2      25)  $\frac{2}{4}$  of 24 = 12  
 22)  $\frac{1}{4}$  of 32 = 8      26)  $\frac{2}{5}$  of 15 = 6  
 23)  $\frac{6}{10}$  of 10 = 6      27)  $\frac{4}{5}$  of 40 = 32  
 24)  $\frac{1}{10}$  of 50 = 5      28)  $\frac{2}{3}$  of 42 = 28

**Simplify these fractions**

- 29)  $\frac{8}{24} = \frac{1}{3}$       33)  $\frac{32}{36} = \frac{8}{9}$   
 30)  $\frac{6}{15} = \frac{2}{5}$       34)  $\frac{15}{12} = 1\frac{1}{4}$   
 31)  $\frac{42}{36} = 1\frac{1}{6}$       35)  $\frac{20}{16} = 1\frac{1}{4}$   
 32)  $\frac{18}{20} = \frac{9}{10}$       36)  $\frac{3}{27} = \frac{1}{9}$

**Insert <, > or =**

- 37)  $\frac{4}{9} < \frac{5}{9}$       40)  $\frac{3}{6} < \frac{8}{9}$       43)  $1\frac{5}{6} = 1\frac{10}{12}$       46)  $\frac{5}{4} = \frac{10}{8}$   
 38)  $\frac{1}{6} > \frac{1}{12}$       41)  $\frac{7}{12} < \frac{8}{9}$       44)  $\frac{10}{6} < \frac{16}{6}$       47)  $\frac{9}{4} < \frac{7}{3}$   
 39)  $\frac{5}{6} > \frac{2}{3}$       42)  $\frac{2}{3} > \frac{3}{12}$       45)  $\frac{4}{6} > \frac{2}{4}$       48)  $\frac{10}{4} < \frac{17}{6}$

**Improper Fractions to Mixed Numbers**

- 49)  $\frac{17}{5} = 3\frac{2}{5}$       53)  $\frac{10}{5} = 2$   
 50)  $\frac{9}{2} = 4\frac{1}{2}$       54)  $\frac{17}{2} = 8\frac{1}{2}$   
 51)  $\frac{13}{5} = 2\frac{3}{5}$       55)  $\frac{49}{5} = 9\frac{4}{5}$   
 52)  $\frac{34}{10} = 3\frac{4}{10}$       56)  $\frac{19}{3} = 6\frac{1}{3}$

**Mixed Numbers to Improper Fractions**

- 57)  $4\frac{2}{6} = \frac{26}{6}$       61)  $6\frac{1}{2} = \frac{13}{2}$   
 58)  $7 = \frac{28}{4}$       62)  $2\frac{4}{5} = \frac{14}{5}$   
 59)  $1\frac{1}{12} = \frac{13}{12}$       63)  $5\frac{2}{3} = \frac{17}{3}$   
 60)  $2\frac{1}{5} = \frac{11}{5}$       64)  $4 = \frac{16}{4}$

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Name: \_\_\_\_\_ Score: \_\_\_\_\_ Converting Common Fractions to Decimals: 8 [ C ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Converting Common Fractions or Mixed Numbers to Decimal Fractions:**

It is important to look at the denominator. If it is a 10 or 100, think of the places that are shown by that denominator.

$$\frac{4}{10} \text{ is 4 tenths so as a decimal it is } 0.4$$

$$\frac{36}{100} \text{ is 36 hundredths so as a decimal it is } 0.36$$

$$3\frac{7}{10} \text{ is 3 and 7 tenths so as a decimal it is } 3.7$$

$$8\frac{54}{100} \text{ is 8 and 54 hundredths so as a decimal it is } 8.54$$

**Convert common fractions to decimals**

1)  $\frac{6}{10} = 0.6$

6)  $\frac{12}{100} = 0.12$

2)  $\frac{2}{10} = 0.2$

7)  $\frac{5}{100} = 0.05$

3)  $\frac{83}{100} = 0.83$

8)  $\frac{78}{100} = 0.78$

4)  $\frac{6}{100} = 0.06$

9)  $\frac{86}{100} = 0.86$

5)  $\frac{20}{100} = 0.2$

10)  $\frac{7}{10} = 0.7$

**Convert mixed numbers to decimals**

11)  $4\frac{3}{100} = 4.03$

16)  $2\frac{6}{10} = 2.6$

12)  $6\frac{41}{100} = 6.41$

17)  $4\frac{2}{10} = 4.2$

13)  $1\frac{65}{100} = 1.65$

18)  $9\frac{15}{100} = 9.15$

14)  $8\frac{83}{100} = 8.83$

19)  $3\frac{8}{10} = 3.8$

15)  $7\frac{9}{10} = 7.9$

20)  $5\frac{7}{10} = 5.7$

**Equivalent fractions**

21)  $\frac{1}{3} = \frac{9}{27}$

23)  $\frac{1}{3} = \frac{6}{18}$

25)  $\frac{2}{4} = \frac{16}{32}$

27)  $\frac{1}{6} = \frac{2}{12}$

22)  $\frac{3}{4} = \frac{27}{36}$

24)  $\frac{3}{4} = \frac{15}{20}$

26)  $\frac{1}{2} = \frac{2}{4}$

28)  $\frac{4}{5} = \frac{20}{25}$

**Multiply fractions by whole numbers**

29)  $\frac{7}{10}$  of 30 = 21

33)  $\frac{1}{5}$  of 35 = 7

30)  $\frac{7}{10}$  of 20 = 14

34)  $\frac{2}{8}$  of 16 = 4

31)  $\frac{1}{2}$  of 12 = 6

35)  $\frac{3}{7}$  of 42 = 18

32)  $\frac{3}{7}$  of 35 = 15

36)  $\frac{3}{6}$  of 12 = 6

**Simplify these fractions**

37)  $\frac{24}{16} = 1\frac{1}{2}$

41)  $\frac{6}{4} = 1\frac{1}{2}$

38)  $\frac{2}{18} = \frac{1}{9}$

42)  $\frac{6}{9} = \frac{2}{3}$

39)  $\frac{12}{16} = \frac{3}{4}$

43)  $\frac{30}{40} = \frac{3}{4}$

40)  $\frac{2}{8} = \frac{1}{4}$

44)  $\frac{12}{9} = 1\frac{1}{3}$

**Insert <, > or =**

45)  $\frac{5}{12} > \frac{1}{3}$

47)  $\frac{2}{3} = \frac{4}{6}$

49)  $\frac{8}{5} > \frac{5}{6}$

51)  $\frac{1}{4} < \frac{14}{5}$

46)  $\frac{11}{12} > \frac{1}{6}$

48)  $\frac{7}{9} > \frac{1}{6}$

50)  $\frac{1}{3} < \frac{3}{4}$

52)  $\frac{7}{5} < \frac{10}{4}$

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Name: \_\_\_\_\_ Score: \_\_\_\_\_ Converting Common Fractions to Decimals: 8 [ D ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Convert common fractions to decimals**

- 1)  $\frac{12}{100} = 0.12$       6)  $\frac{9}{100} = 0.09$   
 2)  $\frac{1}{100} = 0.01$       7)  $\frac{13}{100} = 0.13$   
 3)  $\frac{30}{100} = 0.3$       8)  $\frac{97}{100} = 0.97$   
 4)  $\frac{21}{100} = 0.21$       9)  $\frac{7}{10} = 0.7$   
 5)  $\frac{2}{10} = 0.2$       10)  $\frac{5}{10} = 0.5$

**Convert mixed numbers to decimals**

- 11)  $3\frac{37}{100} = 3.37$       16)  $3\frac{7}{10} = 3.7$   
 12)  $5\frac{8}{10} = 5.8$       17)  $8\frac{5}{100} = 8.05$   
 13)  $9\frac{2}{10} = 9.2$       18)  $5\frac{9}{10} = 5.9$   
 14)  $8\frac{5}{10} = 8.5$       19)  $1\frac{3}{10} = 1.3$   
 15)  $5\frac{1}{10} = 5.1$       20)  $2\frac{30}{100} = 2.3$

**Multiply fractions by whole numbers**

- 21)  $\frac{3}{7}$  of 35 = 15      25)  $\frac{8}{9}$  of 27 = 24  
 22)  $\frac{1}{5}$  of 45 = 9      26)  $\frac{4}{6}$  of 30 = 20  
 23)  $\frac{2}{5}$  of 5 = 2      27)  $\frac{2}{5}$  of 25 = 10  
 24)  $\frac{2}{4}$  of 36 = 18      28)  $\frac{1}{4}$  of 20 = 5

**Simplify these fractions**

- 29)  $\frac{10}{25} = \frac{2}{5}$       33)  $\frac{20}{24} = \frac{5}{6}$   
 30)  $\frac{12}{32} = \frac{3}{8}$       34)  $\frac{48}{32} = 1\frac{1}{2}$   
 31)  $\frac{3}{24} = \frac{1}{8}$       35)  $\frac{8}{32} = \frac{1}{4}$   
 32)  $\frac{18}{24} = \frac{3}{4}$       36)  $\frac{14}{10} = 1\frac{2}{5}$

**Insert <, > or =**

- 37)  $\frac{1}{3} < \frac{4}{6}$       40)  $\frac{1}{9} < \frac{7}{12}$       43)  $\frac{12}{5} = 2\frac{2}{5}$       46)  $\frac{6}{2} > \frac{8}{3}$   
 38)  $\frac{1}{6} < \frac{5}{6}$       41)  $\frac{9}{12} > \frac{2}{3}$       44)  $\frac{9}{6} > 1\frac{2}{6}$       47)  $\frac{4}{3} > \frac{2}{4}$   
 39)  $\frac{4}{12} = \frac{1}{3}$       42)  $\frac{12}{9} < 1\frac{4}{9}$       45)  $\frac{3}{5} > \frac{1}{4}$       48)  $\frac{7}{5} < \frac{11}{6}$

**Improper Fractions to Mixed Numbers**

- 49)  $\frac{7}{2} = 3\frac{1}{2}$       53)  $\frac{16}{4} = 4$   
 50)  $\frac{7}{5} = 1\frac{2}{5}$       54)  $\frac{17}{8} = 2\frac{1}{8}$   
 51)  $\frac{13}{4} = 3\frac{1}{4}$       55)  $\frac{76}{8} = 9\frac{4}{8}$   
 52)  $\frac{60}{10} = 6$       56)  $\frac{37}{5} = 7\frac{2}{5}$

**Mixed Numbers to Improper Fractions**

- 57)  $7\frac{2}{6} = \frac{44}{6}$       61)  $8\frac{1}{4} = \frac{33}{4}$   
 58)  $9 = \frac{45}{5}$       62)  $2\frac{4}{6} = \frac{16}{6}$   
 59)  $2\frac{2}{8} = \frac{18}{8}$       63)  $5\frac{1}{5} = \frac{16}{5}$   
 60)  $8\frac{3}{5} = \frac{43}{5}$       64)  $4 = \frac{20}{5}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Advanced Fractions to Decimals: 9 [A]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Converting Equivalent Common Fractions to Decimal Fractions:**

When the denominator is not a 10 or 100, then the fraction needs to be changed to its equivalent denominator that is 10 or 100.

$$\cancel{\frac{2}{5}} \frac{4}{10} \text{ is 4 tenths so as a decimal it is } 0.4$$

$$\cancel{\frac{5}{20}} \frac{25}{100} \text{ is 25 hundredths so as a decimal it is } 0.25$$

$$3\cancel{\frac{1}{2}} \frac{5}{10} \text{ is 3 and 5 tenths so as a decimal it is } 3.5$$

$$8\cancel{\frac{6}{25}} \frac{24}{100} \text{ is 8 and 24 hundredths so as a decimal it is } 8.24$$

**Convert common fractions to decimals**

$$1) \frac{3}{25} = 0.12 \quad 6) \frac{1}{50} = 0.02$$

$$2) \frac{2}{5} = 0.4 \quad 7) \frac{4}{5} = 0.8$$

$$3) \frac{3}{5} = 0.6 \quad 8) \frac{41}{50} = 0.82$$

$$4) \frac{1}{2} = 0.5 \quad 9) \frac{2}{25} = 0.08$$

$$5) \frac{1}{5} = 0.2 \quad 10) \frac{7}{20} = 0.35$$

**Convert mixed numbers to decimals**

$$11) 4\frac{9}{25} = 4.36 \quad 16) 3\frac{4}{5} = 3.8$$

$$12) 3\frac{12}{20} = 3.6 \quad 17) 5\frac{1}{2} = 5.5$$

$$13) 1\frac{3}{20} = 1.15 \quad 18) 1\frac{8}{25} = 1.32$$

$$14) 1\frac{22}{25} = 1.88 \quad 19) 5\frac{20}{25} = 5.8$$

$$15) 4\frac{5}{20} = 4.25 \quad 20) 6\frac{8}{20} = 6.4$$

**Equivalent fractions**

$$21) \frac{1}{2} = \frac{9}{18} = \frac{8}{16}$$

$$23) \frac{1}{2} = \frac{7}{14} = \frac{9}{18}$$

$$25) \frac{1}{5} = \frac{8}{40} = \frac{3}{15}$$

$$27) \frac{6}{8} = \frac{18}{24} = \frac{30}{40}$$

$$22) \frac{2}{5} = \frac{18}{45} = \frac{12}{30}$$

$$24) \frac{2}{4} = \frac{10}{20} = \frac{6}{12}$$

$$26) \frac{2}{4} = \frac{16}{32} = \frac{10}{20}$$

$$28) \frac{1}{8} = \frac{5}{40} = \frac{6}{48}$$

**Multiplying fractions by whole numbers**

$$29) \frac{2}{4} \text{ of } 8 = 4 \quad 33) \frac{1}{2} \text{ of } 30 = 15$$

$$30) \frac{4}{6} \text{ of } 30 = 20 \quad 34) \frac{5}{9} \text{ of } 45 = 25$$

$$31) \frac{1}{2} \text{ of } 36 = 18 \quad 35) \frac{1}{2} \text{ of } 38 = 19$$

$$32) \frac{1}{3} \text{ of } 12 = 4 \quad 36) \frac{2}{7} \text{ of } 35 = 10$$

**Multiplying whole numbers by fractions**

$$37) 9 \times \frac{3}{9} = 3 \quad 41) 36 \times \frac{2}{4} = 18$$

$$38) 35 \times \frac{4}{7} = 20 \quad 42) 18 \times \frac{1}{2} = 9$$

$$39) 24 \times \frac{7}{8} = 21 \quad 43) 5 \times \frac{2}{5} = 2$$

$$40) 32 \times \frac{4}{8} = 16 \quad 44) 14 \times \frac{3}{7} = 6$$

**Insert <, > or =**

$$45) \frac{1}{3} < \frac{3}{6}$$

$$47) 1\frac{5}{12} > \frac{16}{12}$$

$$49) 2\frac{5}{6} = \frac{17}{6}$$

$$51) \frac{11}{4} > \frac{3}{5}$$

$$46) 3\frac{6}{9} < \frac{34}{9}$$

$$48) \frac{4}{10} = \frac{2}{5}$$

$$50) \frac{4}{6} < \frac{9}{6}$$

$$52) \frac{3}{6} = \frac{9}{18}$$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Advanced Fractions to Decimals: 9 [ B ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Convert common fractions to decimals**

- 1)  $\frac{4}{5} = 0.8$       6)  $\frac{3}{20} = 0.15$   
 2)  $\frac{1}{2} = 0.5$       7)  $\frac{12}{50} = 0.24$   
 3)  $\frac{2}{25} = 0.08$       8)  $\frac{23}{50} = 0.46$   
 4)  $\frac{44}{50} = 0.88$       9)  $\frac{15}{25} = 0.6$   
 5)  $\frac{7}{20} = 0.35$       10)  $\frac{1}{20} = 0.05$

**Convert mixed numbers to decimals**

- 11)  $5\frac{1}{5} = 5.2$       16)  $8\frac{1}{2} = 8.5$   
 12)  $8\frac{3}{20} = 8.15$       17)  $6\frac{34}{50} = 6.68$   
 13)  $2\frac{11}{25} = 2.44$       18)  $4\frac{5}{20} = 4.25$   
 14)  $3\frac{21}{25} = 3.84$       19)  $2\frac{9}{20} = 2.45$   
 15)  $4\frac{15}{20} = 4.75$       20)  $7\frac{8}{50} = 7.16$

**Equivalent fractions**

- 21)  $\frac{2}{4} = \frac{8}{16} = \frac{10}{20}$       24)  $\frac{2}{6} = \frac{4}{12} = \frac{16}{48}$       27)  $\frac{6}{8} = \frac{60}{80} = \frac{54}{72}$       30)  $\frac{1}{3} = \frac{3}{9} = \frac{10}{30}$   
 22)  $\frac{6}{8} = \frac{36}{48} = \frac{60}{80}$       25)  $\frac{3}{6} = \frac{9}{18} = \frac{24}{48}$       28)  $\frac{1}{2} = \frac{3}{6} = \frac{6}{12}$       31)  $\frac{2}{5} = \frac{14}{35} = \frac{4}{10}$   
 23)  $\frac{2}{3} = \frac{12}{18} = \frac{14}{21}$       26)  $\frac{2}{3} = \frac{4}{6} = \frac{8}{12}$       29)  $\frac{1}{6} = \frac{4}{24} = \frac{5}{30}$       32)  $\frac{1}{6} = \frac{2}{12} = \frac{5}{30}$

**Multiplying fractions by whole numbers**

- 33)  $\frac{1}{7}$  of 7 = 1      37)  $\frac{8}{9}$  of 27 = 24  
 34)  $\frac{7}{10}$  of 20 = 14      38)  $\frac{1}{4}$  of 16 = 4  
 35)  $\frac{2}{6}$  of 18 = 6      39)  $\frac{5}{7}$  of 7 = 5  
 36)  $\frac{5}{7}$  of 28 = 20      40)  $\frac{1}{3}$  of 42 = 14

**Multiplying whole numbers by fractions**

- 41)  $45 \times \frac{3}{5} = 27$       45)  $8 \times \frac{1}{8} = 1$   
 42)  $36 \times \frac{1}{3} = 12$       46)  $45 \times \frac{2}{3} = 30$   
 43)  $36 \times \frac{6}{9} = 24$       47)  $4 \times \frac{3}{4} = 3$   
 44)  $24 \times \frac{5}{8} = 15$       48)  $21 \times \frac{2}{3} = 14$

**Improper Fractions to Mixed Numbers**

- 49)  $\frac{15}{5} = 3$       53)  $\frac{65}{8} = 8\frac{1}{8}$   
 50)  $\frac{10}{4} = 2\frac{2}{4}$       54)  $\frac{16}{6} = 2\frac{4}{6}$   
 51)  $\frac{15}{8} = 1\frac{7}{8}$       55)  $\frac{13}{4} = 3\frac{1}{4}$   
 52)  $\frac{21}{5} = 4\frac{1}{5}$       56)  $\frac{19}{3} = 6\frac{1}{3}$

**Mixed Numbers to Improper Fractions**

- 57)  $8\frac{3}{4} = \frac{35}{4}$       61)  $9\frac{2}{6} = \frac{56}{6}$   
 58)  $7 = \frac{21}{3}$       62)  $2\frac{4}{6} = \frac{16}{6}$   
 59)  $8\frac{8}{10} = \frac{88}{10}$       63)  $8\frac{2}{4} = \frac{34}{4}$   
 60)  $2\frac{5}{6} = \frac{17}{6}$       64)  $9 = \frac{36}{4}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Advanced Fractions to Decimals: 9 [ C ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Convert common fractions to decimals**

- 1)  $\frac{1}{2} = 0.5$       6)  $\frac{15}{50} = 0.3$   
 2)  $\frac{9}{20} = 0.45$       7)  $\frac{6}{25} = 0.24$   
 3)  $\frac{6}{25} = 0.24$       8)  $\frac{13}{50} = 0.26$   
 4)  $\frac{1}{5} = 0.2$       9)  $\frac{10}{20} = 0.5$   
 5)  $\frac{48}{50} = 0.96$       10)  $\frac{22}{25} = 0.88$

**Convert mixed numbers to decimals**

- 11)  $5\frac{9}{25} = 5.36$       16)  $1\frac{27}{50} = 1.54$   
 12)  $7\frac{4}{20} = 7.2$       17)  $2\frac{4}{5} = 2.8$   
 13)  $9\frac{1}{2} = 9.5$       18)  $5\frac{13}{25} = 5.52$   
 14)  $8\frac{1}{5} = 8.2$       19)  $4\frac{1}{20} = 4.05$   
 15)  $1\frac{13}{50} = 1.26$       20)  $8\frac{3}{20} = 8.15$

**Subtract the fractions**

- 21)  $6\frac{5}{10} - 4\frac{9}{10} = 1\frac{3}{5}$       23)  $6\frac{3}{8} - 5\frac{4}{8} = \frac{7}{8}$       25)  $6\frac{1}{6} - 2\frac{3}{6} = 3\frac{2}{3}$       27)  $8\frac{5}{10} - 3\frac{8}{10} = 4\frac{7}{10}$   
 22)  $7\frac{1}{12} - 6\frac{10}{12} = 1\frac{1}{4}$       24)  $9\frac{1}{4} - 5\frac{3}{4} = 3\frac{1}{2}$       26)  $9\frac{4}{6} - 8\frac{5}{6} = \frac{5}{6}$       28)  $8\frac{8}{10} - 1\frac{9}{10} = 6\frac{9}{10}$

**Multiplying fractions by whole numbers**

- 29)  $\frac{2}{4}$  of 12 = 6      33)  $\frac{2}{10}$  of 40 = 8  
 30)  $\frac{1}{2}$  of 18 = 9      34)  $\frac{1}{2}$  of 8 = 4  
 31)  $\frac{1}{8}$  of 24 = 3      35)  $\frac{5}{9}$  of 9 = 5  
 32)  $\frac{3}{5}$  of 30 = 18      36)  $\frac{1}{3}$  of 12 = 4

**Multiplying whole numbers by fractions**

- 37)  $9 \times \frac{3}{9} = 3$       41)  $45 \times \frac{1}{5} = 9$   
 38)  $24 \times \frac{6}{8} = 18$       42)  $6 \times \frac{1}{3} = 2$   
 39)  $30 \times \frac{1}{5} = 6$       43)  $16 \times \frac{1}{2} = 8$   
 40)  $28 \times \frac{5}{7} = 20$       44)  $10 \times \frac{5}{10} = 5$

**Simplify these fractions**

- 45)  $\frac{6}{24} = \frac{1}{4}$       47)  $\frac{16}{20} = \frac{4}{5}$       49)  $\frac{10}{4} = 2\frac{1}{2}$       51)  $1\frac{2}{4} = 1\frac{1}{2}$   
 46)  $\frac{10}{6} = 1\frac{2}{3}$       48)  $\frac{60}{30} = 2$       50)  $\frac{8}{4} = 2$       52)  $\frac{7}{3} = 2\frac{1}{3}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Advanced Fractions to Decimals: 9 [ D ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Convert common fractions to decimals**

- 1)  $\frac{15}{20} = 0.75$       6)  $\frac{30}{50} = 0.6$
- 2)  $\frac{7}{25} = 0.28$       7)  $\frac{9}{25} = 0.36$
- 3)  $\frac{8}{50} = 0.16$       8)  $\frac{11}{25} = 0.44$
- 4)  $\frac{42}{50} = 0.84$       9)  $\frac{2}{25} = 0.08$
- 5)  $\frac{4}{20} = 0.2$       10)  $\frac{1}{5} = 0.2$

**Convert mixed numbers to decimals**

- 11)  $2\frac{1}{2} = 2.5$       16)  $3\frac{1}{5} = 3.2$
- 12)  $7\frac{41}{50} = 7.82$       17)  $5\frac{2}{5} = 5.4$
- 13)  $1\frac{43}{50} = 1.86$       18)  $2\frac{8}{25} = 2.32$
- 14)  $9\frac{7}{50} = 9.14$       19)  $7\frac{18}{50} = 7.36$
- 15)  $5\frac{6}{25} = 5.24$       20)  $8\frac{2}{20} = 8.1$

**Add the fractions**

- 21)  $2\frac{3}{10} + 5\frac{3}{10} = 7\frac{3}{5}$
- 22)  $5\frac{1}{5} + 3\frac{4}{5} = 9$
- 23)  $1\frac{1}{12} + 5\frac{11}{12} = 7$
- 24)  $3\frac{3}{4} + 1\frac{1}{4} = 5$
- 25)  $2\frac{3}{6} + 5\frac{4}{6} = 8\frac{1}{6}$
- 26)  $3\frac{4}{6} + 3\frac{4}{6} = 7\frac{1}{3}$
- 27)  $6\frac{4}{6} + 3\frac{1}{6} = 9\frac{5}{6}$
- 28)  $4\frac{10}{12} + 4\frac{6}{12} = 9\frac{1}{3}$

**Multiplying fractions by whole numbers**

- 29)  $\frac{1}{8}$  of 40 = 5
- 30)  $\frac{4}{5}$  of 25 = 20
- 31)  $\frac{1}{4}$  of 24 = 6
- 32)  $\frac{4}{10}$  of 40 = 16
- 33)  $\frac{1}{8}$  of 32 = 4
- 34)  $\frac{5}{8}$  of 16 = 10

**Multiplying whole numbers by fractions**

- 35)  $18 \times \frac{1}{2} = 9$
- 36)  $32 \times \frac{7}{8} = 28$
- 37)  $20 \times \frac{2}{4} = 10$
- 38)  $15 \times \frac{1}{3} = 5$
- 39)  $42 \times \frac{5}{6} = 35$
- 40)  $24 \times \frac{3}{4} = 18$

**Simplify these fractions**

- 41)  $\frac{48}{30} = 1\frac{3}{5}$       44)  $\frac{14}{6} = 2\frac{1}{3}$       47)  $\frac{32}{8} = 4$       50)  $\frac{12}{8} = 1\frac{1}{2}$
- 42)  $\frac{15}{12} = 1\frac{1}{4}$       45)  $\frac{8}{24} = \frac{1}{3}$       48)  $\frac{12}{6} = 2$       51)  $\frac{8}{12} = \frac{2}{3}$
- 43)  $\frac{15}{24} = \frac{5}{8}$       46)  $\frac{2}{16} = \frac{1}{8}$       49)  $\frac{30}{15} = 2$       52)  $\frac{6}{36} = \frac{1}{6}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Revision: 10 [ A ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Convert common fractions to decimals**

- 1)  $\frac{4}{5} = 0.8$       6)  $\frac{2}{20} = 0.1$   
 2)  $\frac{18}{50} = 0.36$       7)  $\frac{43}{50} = 0.86$   
 3)  $\frac{14}{20} = 0.7$       8)  $\frac{18}{20} = 0.9$   
 4)  $\frac{1}{2} = 0.5$       9)  $\frac{40}{50} = 0.8$   
 5)  $\frac{7}{20} = 0.35$       10)  $\frac{3}{5} = 0.6$

**Convert mixed numbers to decimals**

- 11)  $\frac{2}{5} = 0.4$       16)  $\frac{18}{20} = 0.9$   
 12)  $\frac{5}{20} = 0.25$       17)  $\frac{1}{2} = 0.5$   
 13)  $\frac{25}{50} = 0.5$       18)  $\frac{36}{50} = 0.72$   
 14)  $\frac{12}{25} = 0.48$       19)  $\frac{46}{50} = 0.92$   
 15)  $\frac{8}{20} = 0.4$       20)  $\frac{22}{25} = 0.88$

**Equivalent fractions**

- 21)  $\frac{5}{8} = \frac{20}{32} = \frac{35}{56}$       24)  $\frac{2}{3} = \frac{4}{6} = \frac{8}{12}$       27)  $\frac{1}{2} = \frac{6}{12} = \frac{2}{4}$       30)  $\frac{1}{2} = \frac{4}{8} = \frac{6}{12}$   
 22)  $\frac{1}{2} = \frac{4}{8} = \frac{10}{20}$       25)  $\frac{1}{5} = \frac{3}{15} = \frac{2}{10}$       28)  $\frac{3}{5} = \frac{9}{15} = \frac{6}{10}$       31)  $\frac{5}{6} = \frac{30}{36} = \frac{10}{12}$   
 23)  $\frac{1}{2} = \frac{9}{18} = \frac{7}{14}$       26)  $\frac{1}{3} = \frac{4}{12} = \frac{9}{27}$       29)  $\frac{7}{8} = \frac{56}{64} = \frac{21}{24}$       32)  $\frac{7}{8} = \frac{70}{80} = \frac{49}{56}$

**Multiplying fractions by whole numbers**

- 33)  $\frac{1}{2}$  of 20 = 10      37)  $\frac{3}{4}$  of 36 = 27  
 34)  $\frac{1}{3}$  of 27 = 9      38)  $\frac{1}{2}$  of 18 = 9  
 35)  $\frac{4}{5}$  of 25 = 20      39)  $\frac{1}{3}$  of 27 = 9  
 36)  $\frac{4}{7}$  of 14 = 8      40)  $\frac{3}{7}$  of 21 = 9

**Multiplying whole numbers by fractions**

- 41)  $6 \times \frac{2}{6} = 2$       45)  $12 \times \frac{1}{2} = 6$   
 42)  $24 \times \frac{4}{8} = 12$       46)  $40 \times \frac{1}{5} = 8$   
 43)  $25 \times \frac{2}{5} = 10$       47)  $24 \times \frac{2}{6} = 8$   
 44)  $20 \times \frac{4}{5} = 16$       48)  $12 \times \frac{2}{3} = 8$

**Simplify these fractions**

- 49)  $\frac{65}{50} = 1\frac{3}{10}$       53)  $\frac{80}{50} = 1\frac{3}{5}$       57)  $\frac{20}{18} = 1\frac{1}{9}$       61)  $\frac{24}{24} = 1$   
 50)  $\frac{30}{36} = \frac{5}{6}$       54)  $\frac{9}{18} = \frac{1}{2}$       58)  $\frac{30}{20} = 1\frac{1}{2}$       62)  $\frac{6}{18} = \frac{1}{3}$   
 51)  $\frac{16}{24} = \frac{2}{3}$       55)  $\frac{20}{8} = 2\frac{1}{2}$       59)  $\frac{60}{20} = 3$       63)  $\frac{25}{5} = 5$   
 52)  $\frac{3}{12} = \frac{1}{4}$       56)  $\frac{60}{20} = 3$       60)  $\frac{10}{15} = \frac{2}{3}$       64)  $\frac{15}{15} = 1$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Revision: 10 [ B ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Convert common fractions to decimals**

- 1)  $\frac{1}{2} = 0.5$       6)  $\frac{3}{5} = 0.6$   
 2)  $\frac{5}{25} = 0.2$       7)  $\frac{4}{5} = 0.8$   
 3)  $\frac{15}{25} = 0.6$       8)  $\frac{11}{25} = 0.44$   
 4)  $\frac{1}{5} = 0.2$       9)  $\frac{44}{50} = 0.88$   
 5)  $\frac{4}{25} = 0.16$       10)  $\frac{13}{50} = 0.26$

**Convert mixed numbers to decimals**

- 11)  $\frac{1}{2} = 0.5$       16)  $\frac{5}{25} = 0.2$   
 12)  $\frac{25}{50} = 0.5$       17)  $\frac{3}{25} = 0.12$   
 13)  $\frac{10}{25} = 0.4$       18)  $\frac{3}{5} = 0.6$   
 14)  $\frac{5}{25} = 0.2$       19)  $\frac{9}{25} = 0.36$   
 15)  $\frac{2}{20} = 0.1$       20)  $\frac{7}{20} = 0.35$

**Equivalent fractions**

- 21)  $\frac{1}{5} = \frac{4}{20} = \frac{7}{35}$       23)  $\frac{4}{6} = \frac{36}{54} = \frac{40}{60}$       25)  $\frac{1}{3} = \frac{4}{12} = \frac{9}{27}$       27)  $\frac{1}{3} = \frac{6}{18} = \frac{10}{30}$   
 22)  $\frac{1}{5} = \frac{10}{50} = \frac{4}{20}$       24)  $\frac{1}{3} = \frac{8}{24} = \frac{9}{27}$       26)  $\frac{2}{6} = \frac{18}{54} = \frac{10}{30}$       28)  $\frac{1}{3} = \frac{4}{12} = \frac{7}{21}$

**Add the fractions**

- 29)  $2\frac{3}{10} + 5\frac{3}{10} = 7\frac{3}{5}$       31)  $1\frac{1}{12} + 5\frac{11}{12} = 7$       33)  $1\frac{3}{6} + 8\frac{4}{6} = 10\frac{1}{6}$       35)  $6\frac{4}{6} + 3\frac{1}{6} = 9\frac{5}{6}$   
 30)  $5\frac{1}{5} + 3\frac{4}{5} = 9$       32)  $2\frac{3}{4} + 3\frac{1}{4} = 6$       34)  $3\frac{4}{6} + 3\frac{4}{6} = 7\frac{1}{3}$       36)  $4\frac{10}{12} + 4\frac{6}{12} = 9\frac{1}{3}$

**Simplify these fractions**

- 37)  $\frac{16}{24} = \frac{2}{3}$       40)  $\frac{42}{24} = 1\frac{3}{4}$       43)  $\frac{4}{20} = \frac{1}{5}$       46)  $\frac{60}{40} = 1\frac{1}{2}$   
 38)  $\frac{40}{32} = 1\frac{1}{4}$       41)  $\frac{12}{15} = \frac{4}{5}$       44)  $\frac{12}{9} = 1\frac{1}{3}$       47)  $\frac{18}{8} = 2\frac{1}{4}$   
 39)  $\frac{36}{16} = 2\frac{1}{4}$       42)  $\frac{30}{50} = \frac{3}{5}$       45)  $\frac{24}{12} = 2$       48)  $\frac{2}{8} = \frac{1}{4}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Revision: 10 [ C ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Convert common fractions to decimals**

- 1)  $\frac{5}{25} = 0.2$       6)  $\frac{1}{2} = 0.5$   
 2)  $\frac{4}{50} = 0.08$       7)  $\frac{1}{20} = 0.05$   
 3)  $\frac{12}{25} = 0.48$       8)  $\frac{23}{50} = 0.46$   
 4)  $\frac{43}{50} = 0.86$       9)  $\frac{19}{20} = 0.95$   
 5)  $\frac{8}{25} = 0.32$       10)  $\frac{1}{5} = 0.2$

**Convert mixed numbers to decimals**

- 11)  $\frac{5}{25} = 0.2$       16)  $\frac{7}{50} = 0.14$   
 12)  $\frac{1}{5} = 0.2$       17)  $\frac{4}{5} = 0.8$   
 13)  $\frac{1}{2} = 0.5$       18)  $\frac{1}{25} = 0.04$   
 14)  $\frac{23}{50} = 0.46$       19)  $\frac{2}{5} = 0.4$   
 15)  $\frac{47}{50} = 0.94$       20)  $\frac{11}{20} = 0.55$

**Equivalent fractions**

- 21)  $\frac{1}{2} = \frac{2}{4} = \frac{3}{6}$       23)  $\frac{4}{6} = \frac{16}{24} = \frac{12}{18}$       25)  $\frac{4}{5} = \frac{20}{25} = \frac{32}{40}$       27)  $\frac{5}{6} = \frac{30}{36} = \frac{40}{48}$   
 22)  $\frac{1}{4} = \frac{9}{36} = \frac{6}{24}$       24)  $\frac{3}{4} = \frac{30}{40} = \frac{15}{20}$       26)  $\frac{1}{5} = \frac{3}{15} = \frac{7}{35}$       28)  $\frac{1}{6} = \frac{3}{18} = \frac{6}{36}$

**Multiplying fractions by whole numbers**

- 29)  $\frac{4}{10}$  of 10 = 4      33)  $\frac{1}{2}$  of 14 = 7  
 30)  $\frac{3}{4}$  of 36 = 27      34)  $\frac{4}{7}$  of 14 = 8  
 31)  $\frac{6}{10}$  of 20 = 12      35)  $\frac{2}{3}$  of 9 = 6  
 32)  $\frac{2}{3}$  of 15 = 10      36)  $\frac{3}{7}$  of 14 = 6

**Multiplying whole numbers by fractions**

- 37)  $18 \times \frac{1}{2} = 9$       41)  $10 \times \frac{9}{10} = 9$   
 38)  $14 \times \frac{1}{2} = 7$       42)  $15 \times \frac{1}{5} = 3$   
 39)  $21 \times \frac{4}{7} = 12$       43)  $9 \times \frac{2}{9} = 2$   
 40)  $42 \times \frac{5}{6} = 35$       44)  $14 \times \frac{3}{7} = 6$

**Simplify these fractions**

- 45)  $\frac{3}{9} = \frac{1}{3}$       49)  $\frac{21}{24} = \frac{7}{8}$       53)  $\frac{35}{15} = 2\frac{1}{3}$       57)  $\frac{8}{16} = \frac{1}{2}$   
 46)  $\frac{24}{18} = 1\frac{1}{3}$       50)  $\frac{4}{12} = \frac{1}{3}$       54)  $\frac{18}{15} = 1\frac{1}{5}$       58)  $\frac{8}{24} = \frac{1}{3}$   
 47)  $\frac{18}{12} = 1\frac{1}{2}$       51)  $\frac{24}{12} = 2$       55)  $\frac{9}{18} = \frac{1}{2}$       59)  $\frac{30}{15} = 2$   
 48)  $\frac{90}{40} = 2\frac{1}{4}$       52)  $\frac{9}{12} = \frac{3}{4}$       56)  $\frac{12}{16} = \frac{3}{4}$       60)  $\frac{4}{12} = \frac{1}{3}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Revision: 10 [ D ]



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Convert common fractions to decimals**

- 1)  $\frac{1}{2} = 0.5$       6)  $\frac{10}{25} = 0.4$
- 2)  $\frac{1}{5} = 0.2$       7)  $\frac{6}{25} = 0.24$
- 3)  $\frac{3}{5} = 0.6$       8)  $\frac{7}{25} = 0.28$
- 4)  $\frac{10}{50} = 0.2$       9)  $\frac{20}{25} = 0.8$
- 5)  $\frac{5}{20} = 0.25$       10)  $\frac{11}{20} = 0.55$

**Convert mixed numbers to decimals**

- 11)  $\frac{1}{2} = 0.5$       16)  $\frac{2}{20} = 0.1$
- 12)  $\frac{3}{25} = 0.12$       17)  $\frac{3}{5} = 0.6$
- 13)  $\frac{4}{5} = 0.8$       18)  $\frac{24}{50} = 0.48$
- 14)  $\frac{11}{20} = 0.55$       19)  $\frac{45}{50} = 0.9$
- 15)  $\frac{1}{20} = 0.05$       20)  $\frac{9}{20} = 0.45$

**Equivalent fractions**

- 21)  $\frac{1}{3} = \frac{4}{12} = \frac{3}{9}$       23)  $\frac{5}{6} = \frac{30}{36} = \frac{50}{60}$       25)  $\frac{1}{2} = \frac{2}{4} = \frac{8}{16}$       27)  $\frac{7}{8} = \frac{21}{24} = \frac{28}{32}$
- 22)  $\frac{1}{4} = \frac{9}{36} = \frac{10}{40}$       24)  $\frac{4}{6} = \frac{40}{60} = \frac{36}{54}$       26)  $\frac{2}{8} = \frac{16}{64} = \frac{18}{72}$       28)  $\frac{3}{5} = \frac{9}{15} = \frac{27}{45}$

**Subtract the fractions**

- 29)  $8\frac{2}{5} - 5\frac{3}{5} = 2\frac{4}{5}$       31)  $6\frac{8}{10} - 5\frac{9}{10} = \frac{9}{10}$       33)  $5\frac{1}{3} - 4\frac{2}{3} = \frac{2}{3}$       35)  $9\frac{3}{12} - 7\frac{7}{12} = 1\frac{2}{3}$
- 30)  $4\frac{8}{10} - 1\frac{9}{10} = 2\frac{9}{10}$       32)  $7\frac{1}{3} - 3\frac{2}{3} = 3\frac{2}{3}$       34)  $9\frac{1}{5} - 3\frac{3}{5} = 5\frac{3}{5}$       36)  $7\frac{3}{6} - 6\frac{5}{6} = \frac{2}{3}$

**Simplify these fractions**

- 37)  $\frac{9}{24} = \frac{3}{8}$       40)  $\frac{6}{36} = \frac{1}{6}$       43)  $\frac{3}{24} = \frac{1}{8}$       46)  $\frac{6}{24} = \frac{1}{4}$
- 38)  $\frac{20}{24} = \frac{5}{6}$       41)  $\frac{20}{15} = 1\frac{1}{3}$       44)  $\frac{6}{24} = \frac{1}{4}$       47)  $\frac{3}{3} = 1$
- 39)  $\frac{18}{48} = \frac{3}{8}$       42)  $\frac{4}{24} = \frac{1}{6}$       45)  $\frac{5}{15} = \frac{1}{3}$       48)  $\frac{30}{25} = 1\frac{1}{5}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Check Up A



<input checked="" type="checkbox"/> x	equivalent	compare	+/- mixed	adv decimals
<input type="checkbox"/> imp/mixed	simplify	+/- common	decimals	revision

**Multiplying unit fractions by whole numbers**

- 1)  $\frac{1}{6}$  of 12 = 2      6)  $\frac{1}{5}$  of 30 = 6  
 2)  $\frac{1}{8}$  of 24 = 3      7)  $\frac{1}{9}$  of 36 = 4  
 3)  $\frac{1}{9}$  of 9 = 1      8)  $\frac{1}{4}$  of 24 = 6  
 4)  $\frac{1}{7}$  of 42 = 6      9)  $\frac{1}{8}$  of 32 = 4  
 5)  $\frac{1}{6}$  of 18 = 3      10)  $\frac{1}{2}$  of 16 = 8

**Multiplying whole numbers by unit fractions**

- 27)  $32 \times \frac{1}{4} = \underline{8}$       32)  $12 \times \frac{1}{4} = \underline{3}$   
 28)  $40 \times \frac{1}{8} = \underline{5}$       33)  $15 \times \frac{1}{5} = \underline{3}$   
 29)  $21 \times \frac{1}{7} = \underline{3}$       34)  $27 \times \frac{1}{9} = \underline{3}$   
 30)  $28 \times \frac{1}{4} = \underline{7}$       35)  $36 \times \frac{1}{4} = \underline{9}$   
 31)  $35 \times \frac{1}{7} = \underline{5}$       36)  $14 \times \frac{1}{2} = \underline{7}$

**Multiplying fractions by whole numbers (sequenced)**

- 11)  $\frac{1}{6}$  of 24 = 4      15)  $\frac{1}{10}$  of 30 = 3  
 12)  $\frac{3}{6}$  of 24 = 12      16)  $\frac{2}{10}$  of 30 = 6  
 13)  $\frac{1}{3}$  of 12 = 4      17)  $\frac{1}{8}$  of 16 = 2  
 14)  $\frac{2}{3}$  of 12 = 8      18)  $\frac{3}{8}$  of 16 = 6

**Multiplying whole numbers by fractions (sequenced)**

- 37)  $21 \times \frac{1}{7} = \underline{3}$       41)  $30 \times \frac{1}{5} = \underline{6}$   
 38)  $21 \times \frac{2}{7} = \underline{6}$       42)  $30 \times \frac{4}{5} = \underline{24}$   
 39)  $16 \times \frac{1}{4} = \underline{4}$       43)  $36 \times \frac{1}{6} = \underline{6}$   
 40)  $16 \times \frac{3}{4} = \underline{12}$       44)  $36 \times \frac{4}{6} = \underline{24}$

**Multiplying fractions by whole numbers**

- 19)  $\frac{5}{6}$  of 48 = 40      23)  $\frac{2}{3}$  of 30 = 20  
 20)  $\frac{3}{9}$  of 36 = 12      24)  $\frac{5}{9}$  of 27 = 15  
 21)  $\frac{3}{6}$  of 6 = 3      25)  $\frac{4}{8}$  of 16 = 8  
 22)  $\frac{1}{3}$  of 12 = 4      26)  $\frac{6}{7}$  of 21 = 18

**Multiplying whole numbers by fractions**

- 45)  $28 \times \frac{2}{7} = \underline{8}$       49)  $30 \times \frac{5}{6} = \underline{25}$   
 46)  $36 \times \frac{3}{9} = \underline{12}$       50)  $42 \times \frac{4}{6} = \underline{28}$   
 47)  $16 \times \frac{2}{4} = \underline{8}$       51)  $45 \times \frac{2}{5} = \underline{18}$   
 48)  $42 \times \frac{5}{7} = \underline{30}$       52)  $20 \times \frac{5}{10} = \underline{10}$

**Improper Fractions to Mixed Numbers**

- 53)  $\frac{13}{4} = \underline{\hspace{2cm}}$       57)  $\frac{14}{3} = \underline{\hspace{2cm}}$   
 54)  $\frac{9}{5} = \underline{\hspace{2cm}}$       58)  $\frac{18}{5} = \underline{\hspace{2cm}}$   
 55)  $\frac{16}{6} = \underline{\hspace{2cm}}$       59)  $\frac{15}{12} = \underline{\hspace{2cm}}$   
 56)  $\frac{27}{10} = \underline{\hspace{2cm}}$       60)  $\frac{10}{5} = \underline{\hspace{2cm}}$

**Mixed Numbers to Improper Fractions**

- 61)  $4 \frac{1}{4} = \underline{\hspace{2cm}}$       65)  $1 \frac{5}{6} = \underline{\hspace{2cm}}$   
 62)  $3 = \underline{\frac{\hspace{1cm}}{3}}$       66)  $2 \frac{6}{8} = \underline{\hspace{2cm}}$   
 63)  $3 \frac{4}{10} = \underline{\hspace{2cm}}$       67)  $1 \frac{2}{12} = \underline{\hspace{2cm}}$   
 64)  $5 \frac{2}{3} = \underline{\hspace{2cm}}$       68)  $4 \frac{4}{5} = \underline{\hspace{2cm}}$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Check Up B



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Equivalent fractions**

1)  $\frac{1}{2} = \frac{8}{16} = \frac{7}{14}$

4)  $\frac{3}{4} = \frac{21}{28} = \frac{12}{16}$

7)  $\frac{1}{2} = \frac{9}{18} = \frac{5}{10}$

2)  $\frac{2}{6} = \frac{12}{36} = \frac{10}{30}$

5)  $\frac{1}{2} = \frac{6}{12} = \frac{10}{20}$

8)  $\frac{4}{5} = \frac{24}{30} = \frac{20}{25}$

3)  $\frac{1}{8} = \frac{8}{64} = \frac{2}{16}$

6)  $\frac{2}{6} = \frac{18}{54} = \frac{10}{30}$

9)  $\frac{3}{8} = \frac{27}{72} = \frac{21}{56}$

**Simplify these fractions**

10)  $\frac{32}{48} = \frac{2}{3}$

13)  $\frac{6}{48} = \frac{1}{8}$

16)  $\frac{10}{30} = \frac{1}{3}$

19)  $\frac{6}{16} = \frac{3}{8}$

11)  $\frac{8}{12} = \frac{2}{3}$

14)  $\frac{25}{30} = \frac{5}{6}$

17)  $\frac{6}{8} = \frac{3}{4}$

20)  $\frac{2}{8} = \frac{1}{4}$

12)  $\frac{20}{32} = \frac{5}{8}$

15)  $\frac{4}{24} = \frac{1}{6}$

18)  $\frac{10}{12} = \frac{5}{6}$

21)  $\frac{15}{20} = \frac{3}{4}$

**Simplify these fractions, show as a mixed number**

22)  $\frac{24}{18} = 1\frac{1}{3}$

26)  $\frac{14}{12} = 1\frac{1}{6}$

30)  $\frac{80}{30} = 2\frac{2}{3}$

23)  $\frac{45}{30} = 1\frac{1}{2}$

27)  $\frac{32}{16} = 2$

31)  $\frac{20}{12} = 1\frac{2}{3}$

24)  $\frac{36}{30} = 1\frac{1}{5}$

28)  $\frac{28}{20} = 1\frac{2}{5}$

32)  $\frac{30}{18} = 1\frac{2}{3}$

25)  $\frac{50}{40} = 1\frac{1}{4}$

29)  $\frac{12}{8} = 1\frac{1}{2}$

33)  $\frac{45}{25} = 1\frac{4}{5}$

**Multiplying fractions by whole numbers**

34)  $\frac{3}{9}$  of 18 = 6

37)  $\frac{7}{9}$  of 9 = 7

35)  $\frac{5}{6}$  of 36 = 30

38)  $\frac{2}{5}$  of 25 = 10

36)  $\frac{2}{3}$  of 24 = 16

39)  $\frac{5}{10}$  of 20 = 10

**Multiplying whole numbers by fractions**

40)  $20 \times \frac{2}{5} = 8$

43)  $21 \times \frac{6}{7} = 18$

41)  $24 \times \frac{5}{6} = 20$

44)  $10 \times \frac{8}{10} = 8$

42)  $32 \times \frac{6}{8} = 24$

45)  $4 \times \frac{2}{4} = 2$

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Name: \_\_\_\_\_

Score: \_\_\_\_\_

Check Up C



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

Insert &lt;, &gt; or =

1)  $\frac{1}{2} < \frac{5}{8}$

6)  $\frac{3}{5} < \frac{3}{4}$

11)  $\frac{21}{5} = 4\frac{1}{5}$

16)  $3\frac{1}{5} < \frac{17}{5}$

2)  $\frac{5}{8} > \frac{4}{8}$

7)  $\frac{6}{8} > \frac{6}{10}$

12)  $\frac{22}{4} > 5\frac{1}{4}$

17)  $3\frac{1}{3} < \frac{11}{3}$

3)  $\frac{3}{6} = \frac{1}{2}$

8)  $\frac{2}{4} < \frac{7}{8}$

13)  $2\frac{4}{8} = \frac{20}{8}$

18)  $5\frac{2}{3} = \frac{17}{3}$

4)  $\frac{3}{4} > \frac{1}{4}$

9)  $\frac{1}{4} > \frac{1}{8}$

14)  $1\frac{1}{4} < \frac{6}{4}$

19)  $\frac{45}{5} < 9\frac{1}{5}$

5)  $\frac{6}{8} > \frac{1}{8}$

10)  $\frac{2}{8} < \frac{5}{8}$

15)  $4\frac{1}{6} = \frac{25}{6}$

20)  $3\frac{2}{4} = \frac{14}{4}$

Add the fractions and simplify

21)  $\frac{2}{5} + \frac{2}{5} = \frac{4}{5}$

25)  $\frac{1}{8} + \frac{4}{8} = \frac{5}{8}$

22)  $\frac{2}{12} + \frac{7}{12} = \frac{3}{4}$

26)  $\frac{2}{4} + \frac{2}{4} = 1$

23)  $\frac{1}{4} + \frac{2}{4} = \frac{3}{4}$

27)  $\frac{1}{10} + \frac{5}{10} = \frac{3}{5}$

24)  $\frac{2}{3} + \frac{1}{3} = 1$

28)  $\frac{7}{12} + \frac{2}{12} = \frac{3}{4}$

Add the fractions (vertically) and simplify

35) 
$$\begin{array}{r} \frac{5}{10} \\ + \frac{2}{10} \\ \hline \frac{7}{10} \end{array}$$

37) 
$$\begin{array}{r} \frac{2}{6} \\ + \frac{3}{6} \\ \hline \frac{5}{6} \end{array}$$

39) 
$$\begin{array}{r} 2\frac{4}{5} \\ + 3\frac{3}{5} \\ \hline 6\frac{2}{5} \end{array}$$

36) 
$$\begin{array}{r} 1\frac{4}{6} \\ + 2\frac{5}{6} \\ \hline 4\frac{1}{2} \end{array}$$

38) 
$$\begin{array}{r} 4\frac{1}{8} \\ + 3\frac{7}{8} \\ \hline 8 \end{array}$$

40) 
$$\begin{array}{r} 2\frac{6}{10} \\ + 1\frac{8}{10} \\ \hline 4\frac{2}{5} \end{array}$$

Subtract the fractions (change to improper fractions and simplify where necessary)

29) 
$$\begin{array}{r} 1\frac{1}{3} \\ - \frac{2}{3} \\ \hline \frac{2}{3} \end{array}$$

31) 
$$\begin{array}{r} 3\frac{2}{4} \\ - 1\frac{3}{4} \\ \hline 1\frac{3}{4} \end{array}$$

33) 
$$\begin{array}{r} 1\frac{2}{12} \\ - \frac{4}{12} \\ \hline \frac{5}{6} \end{array}$$

30) 
$$\begin{array}{r} 1\frac{2}{4} \\ - \frac{3}{4} \\ \hline \frac{3}{4} \end{array}$$

32) 
$$\begin{array}{r} 5\frac{4}{10} \\ - 2\frac{7}{10} \\ \hline 2\frac{7}{10} \end{array}$$

34) 
$$\begin{array}{r} 3\frac{3}{5} \\ - 2\frac{4}{5} \\ \hline \frac{4}{5} \end{array}$$

Subtract the fractions and simplify

41)  $\frac{2}{3} - \frac{1}{3} = \frac{1}{3}$

45)  $\frac{3}{4} - \frac{2}{4} = \frac{1}{4}$

42)  $\frac{4}{5} - \frac{2}{5} = \frac{2}{5}$

46)  $\frac{7}{8} - \frac{3}{8} = \frac{1}{2}$

43)  $\frac{10}{12} - \frac{5}{12} = \frac{5}{12}$

47)  $\frac{7}{10} - \frac{4}{10} = \frac{3}{10}$

44)  $\frac{6}{12} - \frac{3}{12} = \frac{1}{4}$

48)  $\frac{3}{6} - \frac{2}{6} = \frac{1}{6}$

This worksheet is part of the Professor Pete's Classroom eBook "Bring It On! Fractions Worksheets". This Check Up sheet should be used to assess students' progress after completing worksheet 6D.



Name: \_\_\_\_\_

Score: \_\_\_\_\_

Check Up D



x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Convert decimals to common fractions**

- 1)  $0.7 = \frac{7}{10}$       6)  $0.06 = \frac{6}{100}$   
 2)  $0.77 = \frac{77}{100}$       7)  $0.21 = \frac{21}{100}$   
 3)  $0.6 = \frac{6}{10}$       8)  $0.16 = \frac{16}{100}$   
 4)  $0.73 = \frac{73}{100}$       9)  $0.5 = \frac{5}{10}$   
 5)  $0.1 = \frac{1}{10}$       10)  $0.65 = \frac{65}{100}$

**Convert decimals to mixed numbers**

- 11)  $2.8 = 2\frac{8}{10}$       16)  $5.3 = 5\frac{3}{10}$   
 12)  $3.94 = 3\frac{94}{100}$       17)  $4.4 = 4\frac{4}{10}$   
 13)  $7.13 = 7\frac{13}{100}$       18)  $1.2 = 1\frac{2}{10}$   
 14)  $4.09 = 4\frac{9}{100}$       19)  $4.69 = 4\frac{69}{100}$   
 15)  $6.9 = 6\frac{9}{10}$       20)  $4.04 = 4\frac{4}{100}$

**Convert common fractions to decimals**

- 21)  $\frac{6}{20} = 0.3$       26)  $\frac{34}{50} = 0.68$   
 22)  $\frac{4}{25} = 0.16$       27)  $\frac{14}{20} = 0.7$   
 23)  $\frac{4}{5} = 0.8$       28)  $\frac{5}{25} = 0.2$   
 24)  $\frac{1}{2} = 0.5$       29)  $\frac{23}{50} = 0.46$   
 25)  $\frac{6}{20} = 0.3$       30)  $\frac{40}{50} = 0.8$

**Convert mixed numbers to decimals**

- 31)  $5\frac{1}{2} = 5.5$       36)  $2\frac{2}{5} = 2.4$   
 32)  $1\frac{11}{50} = 1.22$       37)  $1\frac{1}{5} = 1.2$   
 33)  $5\frac{23}{50} = 5.46$       38)  $3\frac{30}{50} = 3.6$   
 34)  $7\frac{2}{20} = 7.1$       39)  $5\frac{29}{50} = 5.58$   
 35)  $3\frac{2}{25} = 3.08$       40)  $6\frac{15}{20} = 6.75$

**Insert <, > or =**

- 41)  $\frac{6}{9} > \frac{4}{12}$       43)  $\frac{4}{6} > \frac{1}{6}$       45)  $\frac{4}{5} > \frac{2}{6}$       47)  $2\frac{3}{4} = \frac{11}{4}$   
 42)  $\frac{2}{9} < \frac{2}{3}$       44)  $\frac{1}{6} < \frac{2}{9}$       46)  $3\frac{2}{3} > \frac{10}{3}$       48)  $\frac{5}{6} > \frac{1}{3}$

**Multiplying fractions by whole numbers**

- 49)  $\frac{5}{6}$  of 48 = 40      53)  $\frac{2}{3}$  of 27 = 18  
 50)  $\frac{9}{10}$  of 10 = 9      54)  $\frac{2}{6}$  of 42 = 14  
 51)  $\frac{1}{2}$  of 14 = 7      55)  $\frac{1}{5}$  of 50 = 10  
 52)  $\frac{5}{7}$  of 28 = 20      56)  $\frac{3}{4}$  of 4 = 3

**Multiplying whole numbers by fractions**

- 57)  $18 \times \frac{1}{2} = 9$       61)  $40 \times \frac{3}{8} = 15$   
 58)  $16 \times \frac{5}{8} = 10$       62)  $45 \times \frac{5}{9} = 25$   
 59)  $24 \times \frac{5}{6} = 20$       63)  $16 \times \frac{3}{8} = 6$   
 60)  $20 \times \frac{4}{5} = 16$       64)  $18 \times \frac{4}{6} = 12$

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<input checked="" type="checkbox"/> x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Multiplying unit fractions by whole numbers**

- 1)  $\frac{1}{9}$  of 45 = 5      6)  $\frac{1}{5}$  of 15 = 3  
 2)  $\frac{1}{4}$  of 32 = 8      7)  $\frac{1}{7}$  of 49 = 7  
 3)  $\frac{1}{9}$  of 27 = 3      8)  $\frac{1}{8}$  of 48 = 6  
 4)  $\frac{1}{2}$  of 8 = 4      9)  $\frac{1}{4}$  of 40 = 10  
 5)  $\frac{1}{9}$  of 18 = 2      10)  $\frac{1}{10}$  of 10 = 1

**Multiplying whole numbers by unit fractions**

- 31)  $21 \times \frac{1}{3} = \underline{7}$       36)  $36 \times \frac{1}{9} = \underline{4}$   
 32)  $42 \times \frac{1}{6} = \underline{7}$       37)  $40 \times \frac{1}{4} = \underline{10}$   
 33)  $28 \times \frac{1}{7} = \underline{4}$       38)  $48 \times \frac{1}{8} = \underline{6}$   
 34)  $42 \times \frac{1}{7} = \underline{6}$       39)  $24 \times \frac{1}{3} = \underline{8}$   
 35)  $16 \times \frac{1}{4} = \underline{4}$       40)  $5 \times \frac{1}{5} = \underline{1}$

**Multiplying fractions by whole numbers**

- 11)  $\frac{1}{6}$  of 24 = 4      21)  $\frac{1}{5}$  of 45 = 9  
 12)  $\frac{2}{6}$  of 24 = 8      22)  $\frac{2}{5}$  of 45 = 18  
 13)  $\frac{1}{9}$  of 54 = 6      23)  $\frac{1}{8}$  of 56 = 7  
 14)  $\frac{3}{9}$  of 54 = 18      24)  $\frac{4}{8}$  of 56 = 28  
 15)  $\frac{1}{3}$  of 18 = 6      25)  $\frac{1}{7}$  of 42 = 6  
 16)  $\frac{2}{3}$  of 18 = 12      26)  $\frac{3}{7}$  of 42 = 18  
 17)  $\frac{1}{4}$  of 32 = 8      27)  $\frac{1}{6}$  of 30 = 5  
 18)  $\frac{3}{4}$  of 32 = 24      28)  $\frac{5}{6}$  of 30 = 25  
 19)  $\frac{1}{7}$  of 28 = 4      29)  $\frac{1}{10}$  of 70 = 7  
 20)  $\frac{3}{7}$  of 28 = 12      30)  $\frac{7}{10}$  of 70 = 49

**Multiplying whole numbers by fractions**

- 41)  $36 \times \frac{1}{6} = \underline{6}$       51)  $24 \times \frac{1}{6} = \underline{4}$   
 42)  $36 \times \frac{3}{6} = \underline{18}$       52)  $24 \times \frac{2}{6} = \underline{8}$   
 43)  $63 \times \frac{1}{9} = \underline{7}$       53)  $42 \times \frac{1}{6} = \underline{7}$   
 44)  $63 \times \frac{5}{9} = \underline{35}$       54)  $42 \times \frac{3}{6} = \underline{21}$   
 45)  $30 \times \frac{1}{10} = \underline{3}$       55)  $81 \times \frac{1}{9} = \underline{9}$   
 46)  $30 \times \frac{8}{10} = \underline{24}$       56)  $81 \times \frac{3}{9} = \underline{27}$   
 47)  $18 \times \frac{1}{6} = \underline{3}$       57)  $25 \times \frac{1}{5} = \underline{5}$   
 48)  $18 \times \frac{4}{6} = \underline{12}$       58)  $25 \times \frac{3}{5} = \underline{15}$   
 49)  $36 \times \frac{1}{9} = \underline{4}$       59)  $32 \times \frac{1}{8} = \underline{4}$   
 50)  $36 \times \frac{5}{9} = \underline{20}$       60)  $32 \times \frac{3}{8} = \underline{12}$

**Revision**

- 61)  $7 + 8 = \underline{15}$       65)  $7 + 6 = \underline{13}$       69)  $4 - 2 = \underline{2}$       73)  $10 - 0 = \underline{10}$   
 62)  $7 + 7 = \underline{14}$       66)  $7 + 3 = \underline{10}$       70)  $12 - 6 = \underline{6}$       74)  $15 - 7 = \underline{8}$   
 63)  $8 + 2 = \underline{10}$       67)  $6 + 7 = \underline{13}$       71)  $6 - 3 = \underline{3}$       75)  $17 - 9 = \underline{8}$   
 64)  $8 + 6 = \underline{14}$       68)  $9 + 7 = \underline{16}$       72)  $20 - 10 = \underline{10}$       76)  $9 - 5 = \underline{4}$

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## Homework

## Improper and Mixed Numbers: 2 HW


 PROFESSOR PETE'S  
**CLASSROOM**

x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Converting Mixed Numbers to Improper Fractions:**

- Remember:

$$2\frac{3}{5} \quad \frac{5}{5} + \frac{5}{5} + \frac{3}{5} = \frac{13}{5} \quad \text{or} \quad (2 \times \frac{5}{5}) + \frac{3}{5} = \frac{13}{5}$$

**Mixed numbers to improper fractions**

- |                                    |                                   |                                     |                                     |
|------------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|
| 1) $3\frac{2}{4} = \frac{14}{4}$   | 6) $4 = \frac{24}{6}$             | 11) $2\frac{4}{7} = \frac{18}{7}$   | 16) $10\frac{2}{3} = \frac{32}{3}$  |
| 2) $4 = \frac{20}{5}$              | 7) $5\frac{2}{3} = \frac{17}{3}$  | 12) $2 = \frac{4}{2}$               | 17) $7\frac{6}{10} = \frac{76}{10}$ |
| 3) $3\frac{7}{8} = \frac{31}{8}$   | 8) $9 = \frac{72}{8}$             | 13) $5\frac{3}{4} = \frac{23}{4}$   | 18) $3\frac{1}{4} = \frac{13}{4}$   |
| 4) $2\frac{4}{10} = \frac{24}{10}$ | 9) $3\frac{1}{2} = \frac{7}{2}$   | 14) $2\frac{3}{4} = \frac{11}{4}$   | 19) $7 = \frac{56}{8}$              |
| 5) $7\frac{2}{8} = \frac{58}{8}$   | 10) $7\frac{5}{6} = \frac{47}{6}$ | 15) $1\frac{3}{12} = \frac{15}{12}$ | 20) $8\frac{1}{3} = \frac{25}{3}$   |

**Converting Improper Fractions to Mixed Numbers:**

- Remember:

$$\frac{11}{4} \quad 11 \div 4 = 2 \text{ with a remainder of } 3 \quad \text{so the mixed number is } 2\frac{3}{4}$$

**Improper fractions to mixed numbers**

- |                                   |                                   |                                   |                                   |
|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| 21) $\frac{14}{6} = 2\frac{2}{6}$ | 26) $\frac{13}{4} = 3\frac{1}{4}$ | 31) $\frac{12}{3} = 4$            | 36) $\frac{8}{2} = 4$             |
| 22) $\frac{7}{5} = 1\frac{2}{5}$  | 27) $\frac{12}{5} = 2\frac{2}{5}$ | 32) $\frac{18}{4} = 4\frac{2}{4}$ | 37) $\frac{17}{5} = 3\frac{2}{5}$ |
| 23) $\frac{10}{6} = 1\frac{4}{6}$ | 28) $\frac{13}{5} = 2\frac{3}{5}$ | 33) $\frac{16}{5} = 3\frac{1}{5}$ | 38) $\frac{16}{3} = 5\frac{1}{3}$ |
| 24) $\frac{15}{5} = 3$            | 29) $\frac{11}{4} = 2\frac{3}{4}$ | 34) $\frac{24}{5} = 4\frac{4}{5}$ | 39) $\frac{16}{4} = 4$            |
| 25) $\frac{25}{8} = 3\frac{1}{8}$ | 30) $\frac{10}{4} = 2\frac{2}{4}$ | 35) $\frac{10}{5} = 2$            | 40) $\frac{11}{2} = 5\frac{1}{2}$ |

**Revision**

- |                  |                  |                   |                   |
|------------------|------------------|-------------------|-------------------|
| 41) $8 + 7 = 15$ | 46) $7 + 2 = 9$  | 51) $5 - 3 = 2$   | 56) $18 - 10 = 8$ |
| 42) $6 + 5 = 11$ | 47) $6 + 3 = 9$  | 52) $13 - 5 = 8$  | 57) $7 - 2 = 5$   |
| 43) $6 + 6 = 12$ | 48) $8 + 6 = 14$ | 53) $19 - 9 = 10$ | 58) $10 - 8 = 2$  |
| 44) $6 + 8 = 14$ | 49) $7 + 5 = 12$ | 54) $18 - 9 = 9$  | 59) $15 - 8 = 7$  |
| 45) $9 + 5 = 14$ | 50) $9 + 7 = 16$ | 55) $13 - 6 = 7$  | 60) $15 - 9 = 6$  |

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x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Equivalent Fractions:**

Equivalent fractions represent the same amount even though they have different numerators and denominators.

For example:

$$\frac{1}{2} = \frac{2}{4} = \frac{4}{8}$$

To make an equivalent fraction you have to multiply or divide the numerator and denominator by the same number.

$$\frac{2}{3} = \frac{2 \times 3}{3 \times 3} = \frac{6}{9}$$

$$\frac{15}{25} = \frac{15 \div 5}{25 \div 5} = \frac{3}{5}$$

**Equivalent Fractions**

1)  $\frac{3}{8} = \frac{30}{80}$

6)  $\frac{3}{6} = \frac{9}{18}$

11)  $\frac{2}{6} = \frac{14}{42}$

16)  $\frac{3}{4} = \frac{18}{24}$

2)  $\frac{1}{2} = \frac{5}{10}$

7)  $\frac{1}{2} = \frac{4}{8}$

12)  $\frac{3}{5} = \frac{27}{45}$

17)  $\frac{2}{6} = \frac{4}{12}$

3)  $\frac{3}{6} = \frac{24}{48}$

8)  $\frac{1}{5} = \frac{10}{50}$

13)  $\frac{3}{6} = \frac{9}{18}$

18)  $\frac{3}{4} = \frac{27}{36}$

4)  $\frac{1}{2} = \frac{8}{16}$

9)  $\frac{1}{3} = \frac{2}{6}$

14)  $\frac{1}{5} = \frac{7}{35}$

19)  $\frac{5}{6} = \frac{25}{30}$

5)  $\frac{2}{6} = \frac{14}{42}$

10)  $\frac{5}{8} = \frac{25}{40}$

15)  $\frac{4}{6} = \frac{36}{54}$

20)  $\frac{1}{5} = \frac{4}{20}$

**Multiplying fractions by whole numbers**

21)  $\frac{1}{3}$  of 18 = 6

26)  $\frac{1}{2}$  of 18 = 9

22)  $\frac{2}{3}$  of 18 = 12

27)  $\frac{1}{8}$  of 64 = 8

23)  $\frac{1}{10}$  of 50 = 5

28)  $\frac{6}{8}$  of 64 = 48

24)  $\frac{9}{10}$  of 50 = 45

29)  $\frac{1}{5}$  of 35 = 7

25)  $\frac{1}{5}$  of 40 = 8

30)  $\frac{3}{5}$  of 45 = 27

**Multiplying whole numbers by fractions**

31)  $27 \times \frac{1}{9} = 3$

36)  $24 \times \frac{3}{4} = 18$

32)  $27 \times \frac{5}{9} = 15$

37)  $36 \times \frac{3}{4} = 27$

33)  $12 \times \frac{2}{4} = 6$

38)  $12 \times \frac{2}{6} = 4$

34)  $24 \times \frac{1}{3} = 8$

39)  $30 \times \frac{1}{6} = 5$

35)  $5 \times \frac{4}{5} = 4$

40)  $49 \times \frac{4}{7} = 28$

**Revision**

41)  $6 + 2 = 8$

46)  $8 + 6 = 14$

51)  $7 - 4 = 3$

56)  $13 - 5 = 8$

42)  $9 + 7 = 16$

47)  $5 + 7 = 12$

52)  $19 - 9 = 10$

57)  $14 - 6 = 8$

43)  $6 + 7 = 13$

48)  $6 + 5 = 11$

53)  $12 - 9 = 3$

58)  $8 - 5 = 3$

44)  $4 + 2 = 6$

49)  $9 + 8 = 17$

54)  $17 - 9 = 8$

59)  $16 - 9 = 7$

45)  $4 + 8 = 12$

50)  $5 + 3 = 8$

55)  $14 - 7 = 7$

60)  $15 - 6 = 9$

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x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Simplifying Fractions:**

Simplifying a fraction means to make an equivalent fraction which has numbers as small as possible. To do this, find the equivalent fraction with the smallest numbers. This means dividing the numerator and denominator with common factors.

For example:  $\frac{3}{9} = \frac{1}{3}$

In some cases a fraction can be simplified even further if you look harder.  $\frac{6}{12} = \frac{3}{6} = \frac{1}{2}$

**Simplify these fractions**

1)  $\frac{18}{30} = \frac{3}{5}$

6)  $\frac{2}{6} = \frac{1}{3}$

11)  $\frac{6}{18} = \frac{1}{3}$

16)  $\frac{15}{18} = \frac{5}{6}$

2)  $\frac{6}{30} = \frac{1}{5}$

7)  $\frac{30}{36} = \frac{5}{6}$

12)  $\frac{10}{15} = \frac{2}{3}$

17)  $\frac{6}{36} = \frac{1}{6}$

3)  $\frac{4}{12} = \frac{1}{3}$

8)  $\frac{12}{16} = \frac{3}{4}$

13)  $\frac{3}{12} = \frac{1}{4}$

18)  $\frac{12}{15} = \frac{4}{5}$

4)  $\frac{10}{20} = \frac{1}{2}$

9)  $\frac{20}{40} = \frac{1}{2}$

14)  $\frac{8}{10} = \frac{4}{5}$

19)  $\frac{24}{30} = \frac{4}{5}$

5)  $\frac{6}{36} = \frac{1}{6}$

10)  $\frac{54}{60} = \frac{9}{10}$

15)  $\frac{12}{30} = \frac{2}{5}$

20)  $\frac{4}{16} = \frac{1}{4}$

**Multiplying fractions by whole numbers**

21)  $\frac{6}{7}$  of 21 = 18

26)  $\frac{4}{5}$  of 20 = 16

22)  $\frac{5}{6}$  of 6 = 5

27)  $\frac{1}{3}$  of 12 = 4

23)  $\frac{9}{10}$  of 20 = 18

28)  $\frac{4}{9}$  of 45 = 20

24)  $\frac{2}{6}$  of 30 = 10

29)  $\frac{4}{8}$  of 16 = 8

25)  $\frac{3}{4}$  of 24 = 18

30)  $\frac{2}{8}$  of 64 = 16

**Multiplying whole numbers by fractions**

31)  $28 \times \frac{1}{7} = 4$

36)  $24 \times \frac{1}{4} = 6$

32)  $5 \times \frac{2}{5} = 2$

37)  $28 \times \frac{3}{7} = 12$

33)  $16 \times \frac{1}{2} = 8$

38)  $81 \times \frac{2}{9} = 18$

34)  $40 \times \frac{5}{8} = 25$

39)  $45 \times \frac{3}{5} = 27$

35)  $20 \times \frac{6}{10} = 12$

40)  $10 \times \frac{1}{2} = 5$

**Revision**

41)  $4 + 6 = 10$

46)  $6 + 4 = 10$

51)  $17 - 8 = 9$

56)  $11 - 5 = 6$

42)  $5 + 3 = 8$

47)  $5 + 7 = 12$

52)  $9 - 5 = 4$

57)  $13 - 8 = 5$

43)  $5 + 6 = 11$

48)  $8 + 5 = 13$

53)  $6 - 4 = 2$

58)  $13 - 7 = 6$

44)  $7 + 6 = 13$

49)  $9 + 7 = 16$

54)  $20 - 10 = 10$

59)  $19 - 9 = 10$

45)  $8 + 7 = 15$

50)  $6 + 8 = 14$

55)  $10 - 8 = 2$

60)  $4 - 2 = 2$

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x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Comparing Fractions:**

When denominators are the same it is easy, the numerator tells you which fraction is larger:

$$\frac{3}{4} > \frac{2}{4}$$

When the denominators are different, the easiest way to compare them is to find an equivalent fraction that make the denominators the same:

$$\frac{3}{4} \square \frac{7}{8}$$

$$\frac{6}{8} < \frac{7}{8}$$

Sometimes both fractions need changing:

$$\frac{3}{4} \square \frac{5}{6}$$

$$\frac{9}{12} < \frac{10}{12}$$

**Insert <, > or =**

1)  $\frac{1}{4} < \frac{3}{4}$

6)  $\frac{2}{4} > \frac{1}{4}$

11)  $\frac{3}{9} = \frac{1}{3}$

16)  $\frac{3}{4} > \frac{4}{6}$

2)  $\frac{5}{8} < \frac{5}{6}$

7)  $\frac{6}{8} = \frac{3}{4}$

12)  $\frac{4}{6} = \frac{2}{3}$

17)  $\frac{3}{4} = \frac{9}{12}$

3)  $\frac{1}{2} < \frac{5}{8}$

8)  $\frac{2}{4} > \frac{2}{8}$

13)  $\frac{1}{3} < \frac{3}{6}$

18)  $\frac{2}{4} > \frac{2}{5}$

4)  $\frac{2}{4} = \frac{1}{2}$

9)  $\frac{5}{8} < \frac{3}{4}$

14)  $\frac{1}{6} < \frac{3}{12}$

19)  $\frac{2}{3} < \frac{3}{4}$

5)  $\frac{3}{8} < \frac{2}{4}$

10)  $\frac{2}{4} = \frac{4}{8}$

15)  $\frac{1}{4} < \frac{2}{3}$

20)  $\frac{5}{6} > \frac{4}{6}$

**Simplify these fractions, show as a mixed number**

21)  $\frac{24}{10} = 2\frac{2}{5}$

25)  $\frac{36}{16} = 2\frac{1}{4}$

29)  $\frac{42}{36} = 1\frac{1}{6}$

22)  $\frac{10}{4} = 2\frac{1}{2}$

26)  $\frac{24}{16} = 1\frac{1}{2}$

30)  $\frac{32}{24} = 1\frac{1}{3}$

23)  $\frac{14}{6} = 2\frac{1}{3}$

27)  $\frac{36}{30} = 1\frac{1}{5}$

31)  $\frac{25}{15} = 1\frac{2}{3}$

24)  $\frac{18}{15} = 1\frac{1}{5}$

28)  $\frac{8}{6} = 1\frac{1}{3}$

32)  $\frac{21}{9} = 2\frac{1}{3}$

**Multiplying fractions by whole numbers**

33)  $\frac{4}{8}$  of 8 = 4

37)  $\frac{4}{8}$  of 16 = 8

34)  $\frac{7}{9}$  of 36 = 28

38)  $\frac{2}{5}$  of 40 = 16

35)  $\frac{2}{7}$  of 42 = 12

39)  $\frac{5}{8}$  of 16 = 10

36)  $\frac{1}{3}$  of 27 = 9

40)  $\frac{3}{8}$  of 48 = 18

**Multiplying whole numbers by fractions**

41)  $12 \times \frac{2}{3} = 8$

45)  $48 \times \frac{3}{6} = 24$

42)  $40 \times \frac{7}{10} = 28$

46)  $36 \times \frac{2}{9} = 8$

43)  $18 \times \frac{2}{9} = 4$

47)  $12 \times \frac{2}{6} = 4$

44)  $14 \times \frac{4}{7} = 8$

48)  $30 \times \frac{2}{3} = 20$

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x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Add the fractions**

1)  $\frac{4}{5} + \frac{3}{5} = 1\frac{2}{5}$

2)  $\frac{2}{3} + \frac{1}{3} = 1$

3)  $\frac{3}{6} + \frac{4}{6} = 1\frac{1}{6}$

4)  $\frac{6}{9} + \frac{5}{9} = 1\frac{2}{9}$

5)  $\frac{2}{3} + \frac{2}{3} = 1\frac{1}{3}$

**Add the fractions. Change the improper fractions to mixed numbers and simplify.**

11) 
$$\begin{array}{r} \frac{4}{6} \\ + \frac{2}{6} \\ \hline 1 \end{array}$$

13) 
$$\begin{array}{r} \frac{2}{3} \\ + \frac{2}{3} \\ \hline 1\frac{1}{3} \end{array}$$

15) 
$$\begin{array}{r} \frac{9}{12} \\ + \frac{10}{12} \\ \hline 1\frac{7}{12} \end{array}$$

12) 
$$\begin{array}{r} \frac{2}{4} \\ + \frac{3}{4} \\ \hline 1\frac{1}{4} \end{array}$$

14) 
$$\begin{array}{r} \frac{11}{12} \\ + \frac{9}{12} \\ \hline 1\frac{2}{3} \end{array}$$

16) 
$$\begin{array}{r} \frac{4}{10} \\ + \frac{7}{10} \\ \hline 1\frac{1}{10} \end{array}$$

**Subtract the fractions (change to improper fractions where necessary)**

6)  $1\frac{2}{8} - \frac{3}{8} = \frac{7}{8}$

7)  $1\frac{2}{6} - \frac{4}{6} = \frac{2}{3}$

8)  $1\frac{2}{10} - \frac{5}{10} = \frac{7}{10}$

9)  $1\frac{4}{10} - \frac{6}{10} = \frac{4}{5}$

10)  $1\frac{1}{3} - \frac{2}{3} = \frac{2}{3}$

**Subtract the fractions (change to improper fractions where necessary)**

17) 
$$\begin{array}{r} 1\frac{1}{3} \\ - \frac{2}{3} \\ \hline \frac{2}{3} \end{array}$$

19) 
$$\begin{array}{r} 1\frac{2}{4} \\ - \frac{3}{4} \\ \hline \frac{3}{4} \end{array}$$

21) 
$$\begin{array}{r} 1\frac{2}{12} \\ - \frac{4}{12} \\ \hline \frac{5}{6} \end{array}$$

18) 
$$\begin{array}{r} 1\frac{2}{4} \\ - \frac{3}{4} \\ \hline \frac{3}{4} \end{array}$$

20) 
$$\begin{array}{r} 1\frac{4}{10} \\ - \frac{7}{10} \\ \hline \frac{7}{10} \end{array}$$

22) 
$$\begin{array}{r} 1\frac{3}{5} \\ - \frac{4}{5} \\ \hline \frac{4}{5} \end{array}$$

**Equivalent fractions**

23)  $\frac{3}{6} = \frac{18}{36}$

27)  $\frac{1}{3} = \frac{5}{15}$

31)  $\frac{1}{6} = \frac{9}{54}$

35)  $\frac{3}{4} = \frac{9}{12}$

24)  $\frac{4}{5} = \frac{40}{50}$

28)  $\frac{1}{2} = \frac{7}{14}$

32)  $\frac{6}{8} = \frac{30}{40}$

36)  $\frac{3}{4} = \frac{12}{16}$

25)  $\frac{1}{2} = \frac{4}{8}$

29)  $\frac{3}{4} = \frac{9}{12}$

33)  $\frac{1}{2} = \frac{9}{18}$

37)  $\frac{4}{8} = \frac{20}{40}$

26)  $\frac{2}{6} = \frac{4}{12}$

30)  $\frac{6}{8} = \frac{24}{32}$

34)  $\frac{5}{6} = \frac{45}{54}$

38)  $\frac{2}{3} = \frac{4}{6}$

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## Homework

## Adding and Subtracting Mixed Numbers: 7 HW



x	equivalent	compare	<b>+/- mixed</b>	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

Add the fractions. Regroup where necessary. Simplify where possible.

$$\begin{array}{r} 1) \quad 2\frac{2}{3} \\ + \quad 4\frac{1}{3} \\ \hline 7 \end{array}$$

$$\begin{array}{r} 3) \quad 2\frac{3}{5} \\ + \quad 4\frac{3}{5} \\ \hline 7\frac{1}{5} \end{array}$$

$$\begin{array}{r} 5) \quad 6\frac{8}{10} \\ + \quad 1\frac{9}{10} \\ \hline 8\frac{7}{10} \end{array}$$

$$\begin{array}{r} 7) \quad 1\frac{1}{12} \\ + \quad 4\frac{1}{12} \\ \hline 5\frac{1}{6} \end{array}$$

$$\begin{array}{r} 2) \quad 3\frac{2}{9} \\ + \quad 5\frac{2}{9} \\ \hline 8\frac{4}{9} \end{array}$$

$$\begin{array}{r} 4) \quad 3\frac{2}{3} \\ + \quad 2\frac{2}{3} \\ \hline 6\frac{1}{3} \end{array}$$

$$\begin{array}{r} 6) \quad 2\frac{4}{6} \\ + \quad 2\frac{5}{6} \\ \hline 5\frac{1}{2} \end{array}$$

$$\begin{array}{r} 8) \quad 1\frac{1}{4} \\ + \quad 3\frac{3}{4} \\ \hline 5 \end{array}$$

Subtract the fractions. Regroup where necessary and simplify.

$$\begin{array}{r} 9) \quad 8\frac{1}{6} \\ - \quad 5\frac{5}{6} \\ \hline 2\frac{1}{3} \end{array}$$

$$\begin{array}{r} 11) \quad 7\frac{4}{6} \\ - \quad 1\frac{5}{6} \\ \hline 5\frac{5}{6} \end{array}$$

$$\begin{array}{r} 13) \quad 9\frac{2}{6} \\ - \quad 3\frac{4}{6} \\ \hline 5\frac{2}{3} \end{array}$$

$$\begin{array}{r} 15) \quad 6\frac{2}{6} \\ - \quad 6\frac{1}{6} \\ \hline 1\frac{1}{6} \end{array}$$

$$\begin{array}{r} 10) \quad 8\frac{1}{3} \\ - \quad 5\frac{2}{3} \\ \hline 2\frac{2}{3} \end{array}$$

$$\begin{array}{r} 12) \quad 7\frac{5}{6} \\ - \quad 7\frac{4}{6} \\ \hline 1\frac{1}{6} \end{array}$$

$$\begin{array}{r} 14) \quad 8\frac{2}{4} \\ - \quad 3\frac{3}{4} \\ \hline 4\frac{3}{4} \end{array}$$

$$\begin{array}{r} 16) \quad 8\frac{8}{10} \\ - \quad 4\frac{9}{10} \\ \hline 3\frac{9}{10} \end{array}$$

Multiplying fractions by whole numbers

$$17) \quad \frac{1}{7} \text{ of } 42 = 6$$

$$21) \quad \frac{2}{4} \text{ of } 32 = 16$$

$$18) \quad \frac{2}{5} \text{ of } 15 = 6$$

$$22) \quad \frac{3}{9} \text{ of } 9 = 3$$

$$19) \quad \frac{2}{4} \text{ of } 36 = 18$$

$$23) \quad \frac{2}{4} \text{ of } 32 = 16$$

$$20) \quad \frac{6}{8} \text{ of } 40 = 30$$

$$24) \quad \frac{2}{3} \text{ of } 15 = 10$$

Multiplying whole numbers by fractions

$$25) \quad 6 \times \frac{2}{3} = 4$$

$$29) \quad 16 \times \frac{1}{8} = 2$$

$$26) \quad 10 \times \frac{1}{2} = 5$$

$$30) \quad 10 \times \frac{2}{10} = 2$$

$$27) \quad 40 \times \frac{9}{10} = 36$$

$$31) \quad 16 \times \frac{1}{2} = 8$$

$$28) \quad 30 \times \frac{2}{3} = 20$$

$$32) \quad 36 \times \frac{4}{6} = 24$$

Insert <, > or =

$$33) \quad 1\frac{1}{3} > \frac{8}{9}$$

$$35) \quad 1\frac{3}{12} < 1\frac{6}{12}$$

$$37) \quad 2\frac{1}{6} < \frac{14}{6}$$

$$39) \quad \frac{2}{3} > \frac{2}{5}$$

$$34) \quad 3\frac{1}{3} = \frac{10}{3}$$

$$36) \quad \frac{5}{9} < \frac{8}{6}$$

$$38) \quad 2\frac{3}{5} > \frac{12}{5}$$

$$40) \quad 4\frac{4}{5} = \frac{24}{5}$$

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x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Converting Decimal Fractions to Common Fractions or Mixed Numbers:**

It is important to look at the places shown by each decimal. If only the tenths place is shown then use 10 as the denominator; if hundredths, then use 100 as the denominator.

$$0.4 \text{ is 4 tenths} \quad 0.4 = \frac{4}{10}$$

$$0.36 \text{ is 36 hundredths} \quad 0.36 = \frac{36}{100}$$

$$2.5 \text{ is 2 and 5 tenths} \quad 2.5 = 2 \frac{5}{10}$$

$$6.78 \text{ is 6 and 78 hundredths} \quad 6.78 = 6 \frac{78}{100}$$

**Convert decimals to common fractions**

- |                            |                             |
|----------------------------|-----------------------------|
| 1) $0.19 = \frac{19}{100}$ | 6) $0.59 = \frac{59}{100}$  |
| 2) $0.8 = \frac{8}{10}$    | 7) $0.16 = \frac{16}{100}$  |
| 3) $0.9 = \frac{90}{100}$  | 8) $0.3 = \frac{3}{10}$     |
| 4) $0.43 = \frac{43}{100}$ | 9) $0.5 = \frac{5}{10}$     |
| 5) $0.33 = \frac{33}{100}$ | 10) $0.82 = \frac{82}{100}$ |

**Convert decimals to mixed numbers**

- |                               |                               |
|-------------------------------|-------------------------------|
| 11) $3.6 = 3 \frac{6}{10}$    | 16) $5.7 = 5 \frac{70}{100}$  |
| 12) $0.7 = \frac{7}{10}$      | 17) $7.03 = 7 \frac{3}{100}$  |
| 13) $2.68 = 2 \frac{68}{100}$ | 18) $5.14 = 5 \frac{14}{100}$ |
| 14) $5.6 = 5 \frac{60}{100}$  | 19) $1.69 = 1 \frac{69}{100}$ |
| 15) $1.9 = 1 \frac{9}{10}$    | 20) $0.49 = \frac{49}{100}$   |

**Converting Common Fractions or Mixed Numbers to Decimal Fractions:**

It is important to look at the denominator. If it is a 10 or 100, think of the places that are shown by that denominator.

$$\frac{4}{10} \text{ is 4 tenths so as a decimal it is } 0.4$$

$$\frac{36}{100} \text{ is 36 hundredths so as a decimal it is } 0.36$$

$$3 \frac{7}{10} \text{ is 3 and 7 tenths so as a decimal it is } 3.7$$

$$8 \frac{54}{100} \text{ is 8 and 54 hundredths so as a decimal it is } 8.54$$

**Convert common fractions to decimals**

- |                             |                             |
|-----------------------------|-----------------------------|
| 21) $\frac{11}{100} = 0.11$ | 26) $\frac{2}{10} = 0.2$    |
| 22) $\frac{1}{10} = 0.1$    | 27) $\frac{3}{100} = 0.03$  |
| 23) $\frac{33}{100} = 0.33$ | 28) $\frac{47}{100} = 0.47$ |
| 24) $\frac{5}{10} = 0.5$    | 29) $\frac{39}{100} = 0.39$ |
| 25) $\frac{42}{100} = 0.42$ | 30) $\frac{8}{10} = 0.8$    |

**Convert mixed numbers to decimals**

- |                               |                               |
|-------------------------------|-------------------------------|
| 31) $6 \frac{41}{100} = 6.41$ | 36) $6 \frac{8}{10} = 6.8$    |
| 32) $4 \frac{20}{100} = 4.2$  | 37) $2 \frac{26}{100} = 2.26$ |
| 33) $1 \frac{32}{100} = 1.32$ | 38) $3 \frac{40}{100} = 3.4$  |
| 34) $7 \frac{3}{10} = 7.3$    | 39) $5 \frac{31}{100} = 5.31$ |
| 35) $\frac{9}{10} = 0.9$      | 40) $3 \frac{7}{10} = 3.7$    |

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x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Converting Equivalent Common Fractions to Decimal Fractions:**

When the denominator is not a 10 or 100, then the fraction needs to be changed to its equivalent denominator that is 10 or 100.

$$\cancel{2}/5 \times \frac{4}{10} \text{ is 4 tenths so as a decimal it is } 0.4$$

$$\cancel{5}/20 \times \frac{25}{100} \text{ is 25 hundredths so as a decimal it is } 0.25$$

$$3\cancel{1}/2 \times \frac{5}{10} \text{ is 3 and 5 tenths so as a decimal it is } 3.5$$

$$8\cancel{6}/25 \times \frac{24}{100} \text{ is 8 and 24 hundredths so as a decimal it is } 8.24$$

**Convert common fractions to decimals**

- |                           |                            |
|---------------------------|----------------------------|
| 1) $\frac{17}{50} = 0.34$ | 11) $\frac{22}{50} = 0.44$ |
| 2) $\frac{9}{25} = 0.36$  | 12) $\frac{1}{2} = 0.5$    |
| 3) $\frac{2}{5} = 0.4$    | 13) $\frac{1}{5} = 0.2$    |
| 4) $\frac{1}{50} = 0.02$  | 14) $\frac{18}{50} = 0.36$ |
| 5) $\frac{22}{25} = 0.88$ | 15) $\frac{8}{25} = 0.32$  |
| 6) $\frac{3}{5} = 0.6$    | 16) $\frac{23}{25} = 0.92$ |
| 7) $\frac{7}{20} = 0.35$  | 17) $\frac{11}{20} = 0.55$ |
| 8) $\frac{11}{50} = 0.22$ | 18) $\frac{2}{20} = 0.1$   |
| 9) $\frac{15}{50} = 0.3$  | 19) $\frac{9}{20} = 0.45$  |
| 10) $\frac{6}{25} = 0.24$ | 20) $\frac{9}{25} = 0.36$  |

**Convert mixed numbers to decimals**

- |                             |                             |
|-----------------------------|-----------------------------|
| 21) $1\frac{4}{5} = 1.8$    | 31) $8\frac{10}{25} = 8.4$  |
| 22) $8\frac{1}{2} = 8.5$    | 32) $7\frac{5}{20} = 7.25$  |
| 23) $1\frac{2}{5} = 1.4$    | 33) $3\frac{1}{5} = 3.2$    |
| 24) $4\frac{2}{20} = 4.1$   | 34) $8\frac{3}{5} = 8.6$    |
| 25) $5\frac{32}{50} = 5.64$ | 35) $7\frac{7}{25} = 7.28$  |
| 26) $1\frac{14}{50} = 1.28$ | 36) $6\frac{6}{20} = 6.3$   |
| 27) $9\frac{13}{50} = 9.26$ | 37) $1\frac{11}{20} = 1.55$ |
| 28) $5\frac{7}{20} = 5.35$  | 38) $1\frac{16}{50} = 1.32$ |
| 29) $7\frac{10}{25} = 7.4$  | 39) $7\frac{11}{25} = 7.44$ |
| 30) $7\frac{9}{20} = 7.45$  | 40) $3\frac{27}{50} = 3.54$ |

**Multiply fractions by whole numbers**

- |                               |                               |
|-------------------------------|-------------------------------|
| 41) $\frac{5}{6}$ of 36 = 30  | 45) $\frac{2}{6}$ of 36 = 12  |
| 42) $\frac{3}{4}$ of 16 = 12  | 46) $\frac{9}{10}$ of 40 = 36 |
| 43) $\frac{6}{10}$ of 10 = 6  | 47) $\frac{5}{8}$ of 48 = 30  |
| 44) $\frac{5}{10}$ of 40 = 20 | 48) $\frac{4}{9}$ of 18 = 8   |

**Multiply whole numbers by fractions**

- |                                  |                                   |
|----------------------------------|-----------------------------------|
| 49) $36 \times \frac{2}{9} = 8$  | 53) $10 \times \frac{4}{10} = 4$  |
| 50) $40 \times \frac{2}{8} = 10$ | 54) $30 \times \frac{4}{6} = 20$  |
| 51) $42 \times \frac{4}{6} = 28$ | 55) $30 \times \frac{7}{10} = 21$ |
| 52) $18 \times \frac{1}{2} = 9$  | 56) $15 \times \frac{2}{3} = 10$  |

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x	equivalent	compare	+/- mixed	adv decimals
imp/mixed	simplify	+/- common	decimals	revision

**Simplify these fractions**

1)  $\frac{2}{8} = \frac{1}{4}$

3)  $\frac{18}{24} = \frac{3}{4}$

5)  $\frac{22}{6} = 3\frac{2}{3}$

7)  $\frac{35}{25} = 1\frac{2}{5}$

2)  $\frac{45}{50} = \frac{9}{10}$

4)  $\frac{9}{24} = \frac{3}{8}$

6)  $\frac{6}{18} = \frac{1}{3}$

8)  $\frac{4}{32} = \frac{1}{8}$

**Convert common fractions to decimals**

9)  $\frac{1}{2} = 0.5$

14)  $\frac{3}{5} = 0.6$

10)  $\frac{10}{25} = 0.4$

15)  $\frac{4}{5} = 0.8$

11)  $\frac{6}{25} = 0.24$

16)  $\frac{11}{25} = 0.44$

12)  $\frac{1}{5} = 0.2$

17)  $\frac{44}{50} = 0.88$

13)  $\frac{4}{25} = 0.16$

18)  $\frac{13}{50} = 0.26$

**Convert mixed numbers to decimals**

19)  $1\frac{1}{2} = 1.5$

24)  $9\frac{5}{25} = 9.2$

20)  $2\frac{29}{50} = 2.58$

25)  $6\frac{2}{25} = 6.08$

21)  $7\frac{7}{25} = 7.28$

26)  $3\frac{3}{5} = 3.6$

22)  $8\frac{5}{25} = 8.2$

27)  $2\frac{9}{25} = 2.36$

23)  $4\frac{2}{20} = 4.1$

28)  $1\frac{7}{20} = 1.35$

**Add the fractions**

29) 
$$\begin{array}{r} 4\frac{5}{8} \\ + 1\frac{3}{8} \\ \hline 6 \end{array}$$

30) 
$$\begin{array}{r} 4\frac{3}{10} \\ + 2\frac{3}{10} \\ \hline 6\frac{3}{5} \end{array}$$

31) 
$$\begin{array}{r} 5\frac{8}{9} \\ + 5\frac{1}{9} \\ \hline 11 \end{array}$$

32) 
$$\begin{array}{r} 6\frac{1}{9} \\ + 5\frac{6}{9} \\ \hline 11\frac{7}{9} \end{array}$$

**Subtract the fractions**

33) 
$$\begin{array}{r} 9\frac{1}{4} \\ - 7\frac{3}{4} \\ \hline 1\frac{1}{2} \end{array}$$

34) 
$$\begin{array}{r} 6\frac{2}{6} \\ - 1\frac{3}{6} \\ \hline 4\frac{5}{6} \end{array}$$

35) 
$$\begin{array}{r} 5\frac{10}{12} \\ - 3\frac{9}{12} \\ \hline 2\frac{1}{12} \end{array}$$

36) 
$$\begin{array}{r} 5\frac{2}{6} \\ - 3\frac{4}{6} \\ \hline 1\frac{2}{3} \end{array}$$

**Add the fractions**

37)  $8\frac{4}{10} + 1\frac{9}{10} = 10\frac{3}{10}$

38)  $1\frac{7}{9} + 4\frac{1}{9} = 5\frac{8}{9}$

**Subtract the fractions**

39)  $1\frac{2}{5} - \frac{3}{5} = \frac{4}{5}$

40)  $3\frac{2}{6} - \frac{5}{6} = 2\frac{1}{2}$

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