Name: Score: Percent: 1 [A]



% Intro	10%+dis	25%+dis	10%	50% inc	1% 0.5%	Revision
Common	to %	50%+dis	100+%	100+% ind	c Adv	percent

Percent:

Percent means "out of 100 parts" ("cent" refers to 100; think 100c = a dollar) A percent is a number—it is a fraction, as it is a number of parts out of 100.

60 % is 60 out of 100. It is equal to the common fraction $\frac{60}{100}$ and the decimal fraction 0.60 or 0.6

Common and decimal fractions can be written as percentages. Of course in common fractions it is easiest if the denominator is 100.

0.34 or $\frac{34}{100}$ can be written as 34%

Convert these percents to common fractions

Convert these percents to decimals

Convert these common fractions to percents

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

26)
$$\frac{66}{100} =$$

$$\frac{16}{100} =$$

$$\frac{45}{100} =$$

$$\frac{8}{100} =$$

$$\frac{55}{100} =$$

$$\frac{46}{100} =$$

$$\frac{17}{100} =$$

25)
$$\frac{15}{100} =$$

$$\frac{5}{100} =$$

Convert these decimals to percents

$$0.26 =$$

$$0.27 =$$

$$0.48 =$$

$$0.89 =$$

$$0.13 =$$

$$0.80 =$$

$$0.03 =$$

$$0.98 =$$

$$0.09 =$$

$$0.44 =$$

Comparing fractions:

Change mixed numbers to improper then compare.

e.g:
$$2^{\frac{14}{5}} > \frac{13}{5}$$

Convert any fractions with different denominators to the same denominator, 6

then compare. $\frac{3}{6}$

Insert <, > or =

$$^{5)}$$
 $3\frac{1}{4}$ $\frac{14}{4}$

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

6)
$$\frac{5}{3}$$
 — $\frac{5}{4}$

$$^{7)}$$
 $3\frac{1}{4}$ ____ $\frac{11}{4}$

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

Percent: Name: Score: 1 [B]



% Intro	10%+dis	25%+dis	10%	50% inc	1% 0.5%	Revision
	non to %	50%+dis	100+%	100+% inc	Adv	percent

Convert these percents to common fractions

Convert these percents to decimals

Convert these common fractions to percents

$$\frac{58}{100} =$$

$$\frac{62}{100} =$$

$$\frac{97}{100} =$$

$$\frac{40}{100} =$$

$$\frac{7}{100} =$$

$$\frac{58}{100} =$$

$$\frac{81}{100} = \underline{}$$

$$\frac{12}{100} =$$

25)
$$\frac{13}{100} =$$

30)
$$\frac{1}{100} =$$

Convert these decimals to percents

$$0.20 = _{36}$$

$$0.41 =$$

$$0.81 =$$

$$0.75 =$$

$$0.09 =$$

$$0.02 =$$

Insert <, > or =

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

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

$$^{7)}$$
 $4\frac{1}{4}$ $\frac{14}{4}$

10)
$$\frac{3}{4}$$
 $\frac{12}{5}$

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

$$^{5)}$$
 $2\frac{4}{8}$ $\underline{}$ $\frac{22}{8}$

$$^{3)}$$
 $1\frac{4}{9}$ $\frac{14}{9}$

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

9)
$$\frac{2}{5}$$
 $\frac{8}{5}$

12)
$$\frac{10}{4}$$
 ____ $\frac{4}{3}$

Addition rainbow pairs to 10

17)
$$+ 9 = 10$$
 22) $+ 5 = 10$

Subtraction rainbow pairs to 10

Percent: Name: Score: 1[C]



% Intro	10%+dis	25%+dis	10%	50% inc	1% 0.5%	Revision
	non to %	50%+dis	100+%	100+% ind	c Adv	percent

Convert these percents to common fractions

Convert these percents to decimals

2 % =____

$$15)$$
 50 % = $20)$

Percent:

With decimal fractions, take care to convert tenths to hundredths before converting to a percent.

$$0.6$$
 is 0.60 or 60%

Convert these common fractions to percents

$$\frac{40}{100} =$$

$$\frac{60}{100} =$$

$$\frac{91}{100} =$$

$$\frac{44}{100} =$$

$$\frac{2}{100} =$$

$$\frac{51}{100} =$$

$$\frac{88}{100} =$$

$$\frac{16}{100} =$$

$$\frac{15}{100} =$$

$$\frac{8}{100} =$$

Convert these decimals to percents

$$0.23 =$$

$$0.42 =$$

$$0.8 =$$

$$0.04 =$$

$$0.71 =$$

$$0.03 =$$

$$0.9 =$$

Insert <, > or =

$$\frac{3}{12} - \frac{4}{6}$$

$$\frac{2}{3} - \frac{1}{3}$$

$$\frac{2}{3} - \frac{10}{4}$$

$$\frac{6}{4} - \frac{2}{3}$$

$$^{2)}$$
 $4\frac{1}{6}$ $\frac{25}{6}$

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

6)
$$\frac{2}{5}$$
 $\frac{3}{10}$

Addition revision

Subtraction revision

Percent: Name: Score: 1 [D]



% Intro	10%+dis	25%+dis	10%	50% inc	1% 0.5%	Revision
	non to %	50%+dis	100+%	100+% ind	Adv	percent

Convert these percents to common fractions

Convert these percents to decimals

$$20\% =$$

Convert these common fractions to percents

$$\frac{47}{100} =$$

$$\frac{70}{100} =$$

$$\frac{94}{100} =$$

$$\frac{45}{100} =$$

$$\frac{6}{100} =$$

$$\frac{52}{100} =$$

$$\frac{86}{100} =$$

$$\frac{19}{100} =$$

$$\frac{12}{100} =$$

$$\frac{7}{100} =$$

Convert these decimals to percents

$$0.73 = 36$$

$$0.26 =$$

$$0.12 = {}^{37)}$$

$$0.7 =$$

$$0.06 =$$

$$0.08 =$$

$$0.1 =$$

$$0.01 = 40$$

$$0.9 =$$

Insert <, > or =

$$4\frac{5}{6} - \frac{45}{6}$$

4)
$$\frac{2}{3}$$
 — $\frac{2}{3}$

$$\frac{2}{4} - \frac{9}{4}$$

$$\frac{10)}{3} \frac{14}{3}$$
 $\frac{4}{3}$

$$2\frac{1}{3} = \frac{8}{3}$$

$$\frac{4}{12} - \frac{1}{6}$$

11)
$$\frac{11}{4} - \frac{9}{5}$$

6)
$$4\frac{1}{9}$$
 $\frac{37}{9}$

9)
$$\frac{6}{4}$$
 $\frac{13}{5}$

Addition revision

This worksheet is part of the Professor Pete's Classroom eBook "Bring It On! Percentages Worksheets". The recommended teaching sequence is shown in the bar at the top of this sheet. Have the students record their time taken to complete the page.

17) 10 + 7 = ____ 22) 1 + 9 =

Name: Score: Percent: 1 [A]



% Intro	10%+dis	25%+dis	10%	50% inc	1% 0.5%	Revision
	non to %	50%+dis	100+%	100+% inc	Adv	percent

Percent:

Percent means "out of 100 parts" ("cent" refers to 100; think 100c = a dollar) A percent is a number—it is a fraction, as it is a number of parts out of 100.

60~% is 60 out of 100. It is equal to the common fraction $\frac{60}{100}$ and the decimal fraction 0.60~or~0.6

Common and decimal fractions can be written as percentages. Of course in common fractions it is easiest if the denominator is 100.

0.34 or $\frac{34}{100}$ can be written as 34%

Convert these percents to common fractions

1)
$$50\% = \frac{50}{100}$$

6)
$$5\% = \frac{5}{100}$$

$$^{2)}$$
 34% = $\frac{34}{100}$

7)
$$48\% = \frac{49}{100}$$

$$^{3)}$$
 75% = $\frac{75}{100}$

8)
$$10\% = \frac{10}{100}$$

4)
$$67\% = \frac{67}{100}$$

9)
$$1\% = \frac{1}{100}$$

5)
$$18\% = \frac{18}{100}$$

$$95\% = \frac{95}{100}$$

Convert these percents to decimals

$$25\% = 0.25$$

$$9\% = 0.09$$

$$15\% = 0.15$$

$$2\% = 0.02$$

$$20\% = 0.20$$

$$^{18)}$$
 $68\% = 0.68$

$$70\% = 0.70$$

$$^{19)}$$
 11% = 0.11

$$^{15)}$$
 39% = 0.39

$$99\% = 0.99$$

Convert these common fractions to percents

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

$$\frac{66}{100} = 66 \%$$

$$\frac{16}{100} = 16 \%$$

$$\frac{27)}{100} = 45 \%$$

$$\frac{8}{100} = 8 \%$$

$$\frac{28)}{100} = 55 \%$$

$$\frac{46}{100} = 46 \%$$

$$\frac{17}{100} = 17 \%$$

$$\frac{15}{100} = 15 \%$$

$$\frac{5}{100} = 5 \%$$

Convert these decimals to percents

$$0.26 = 26\%$$

$$0.27 = 27 \%$$

$$0.48 = 48\%$$

$$0.89 = 89\%$$

$$0.13 = 13\%$$

$$0.80 = 80 \%$$

$$0.03 = 3\%$$

$$0.98 = 98\%$$

$$0.09 = 9\%$$

$$0.44 = 44\%$$

Comparing fractions:

Change mixed numbers to improper then compare.

e.g: $2^{\frac{14}{5}} > \frac{13}{5}$

Convert any fractions with different denominators to the same denominator, 6

then compare. $\frac{3}{6}$ $\frac{0}{12}$ $\frac{7}{12}$

Insert <, > or =

1)
$$\frac{16}{6} > \frac{3}{6}$$

$$3\frac{1}{4} < \frac{14}{4}$$

$$\frac{1}{4} < \frac{1}{3}$$

6)
$$\frac{5}{3} > \frac{5}{4}$$

3)
$$\frac{11}{4} > \frac{7}{6}$$

$$^{7)}$$
 $3\frac{1}{4} \ge \frac{11}{4}$

4)
$$\frac{1}{4} < \frac{6}{4}$$

8)
$$\frac{17}{6} > \frac{9}{5}$$

Percent: Name: Score: 1 [B]



% Intro	10%+dis	25%+dis	10%	50% inc	1% 0.5%	Revision
Comn	non to %	50%+dis	100+%	100+% inc	Adv	percent

Convert these percents to common fractions

1)
$$55\% = \frac{55}{100}$$

6)
$$6\% = \frac{6}{100}$$

$$^{2)}$$
 33% = $\frac{33}{100}$

7)
$$42\% = \frac{42}{100}$$

$$^{3)}$$
 7% = $\frac{7}{100}$

8)
$$12\% = \frac{12}{100}$$

4)
$$60\% = \frac{60}{100}$$

9)
$$4\% = \frac{4}{100}$$

5)
$$11\% = \frac{11}{100}$$

10) 99% =
$$\frac{99}{100}$$

Convert these percents to decimals

$$^{11)}$$
 $22\% = 0.22$

$$6\% = 0.06$$

$$19\% = 0.19$$

$$8\% = 0.08$$

$$^{13)}$$
 $29\% = 0.29$

$$61\% = 0.61$$

$$75\% = 0.75$$

$$35\% = 0.35$$

$$91\% = 0.91$$

Convert these common fractions to percents

$$\frac{58}{100} = 58 \%$$

$$\frac{62}{100} = 62 \%$$

$$\frac{97}{100} = 97 \%$$

$$\frac{40}{100} = 40 \%$$

$$\frac{7}{100} = 7 \%$$

$$\frac{58}{100} = 58 \%$$

$$\frac{81}{100} = 81 \%$$

$$\frac{12}{100} = 12 \%$$

$$\frac{13}{100} = 13 \%$$

$$\frac{1}{100} = 1 \%$$

Convert these decimals to percents

$$0.20 = 20 \%$$

$$0.29 = 29\%$$

$$0.41 = 41\%$$

$$0.81 = 81\%$$

$$0 = 0 \%$$

$$0.75 = 75\%$$

$$0.09 = 9\%$$

$$0.10 = 10\%$$

$$0.02 = 2\%$$

$$0.42 = 42\%$$

Insert <, > or =

1)
$$\frac{4}{6} > \frac{1}{6}$$

$$\frac{4)}{3} \ge \frac{1}{6}$$

7)
$$4\frac{1}{4} > \frac{14}{4}$$

$$\frac{10)}{4} < \frac{12}{5}$$

$$\frac{5}{12} > \frac{1}{6}$$

$$^{5)}$$
 $2\frac{4}{8} \leq \frac{22}{8}$

8)
$$\frac{13}{5} > \frac{11}{5}$$

$$\frac{11)}{5} \leq \frac{14}{6}$$

$$1\frac{4}{9} < \frac{14}{9}$$

6)
$$\frac{2}{9} < \frac{2}{3}$$

9)
$$\frac{2}{5} < \frac{8}{5}$$

12)
$$\frac{10}{4} > \frac{4}{3}$$

Addition rainbow pairs to 10

15)
$$6 + 4 = 10$$
 20) $9 + 1 = 10$

16)
$$6 + 4 = 10$$
 21) $7 + 3 = 10$

22)
$$5 + 5 = 10$$

Subtraction rainbow pairs to 10

28)
$$10 - 5 = 5$$

29)
$$10 - 6 = 4$$

25)
$$10 - 3 = \frac{7}{2}$$
 30) $10 - 4 = \frac{6}{2}$

26)
$$10 - 7 = 3$$
 31) $10 - 1 = 9$

31)
$$10 - 1 = 9$$

27)
$$10 - 5 = 5$$
 32) $10 - 2 = 8$

32)
$$10 - 2 = 8$$

Percent: Name: Score: 1 [C]



% Intro	10%+dis	25%+dis	10%	50% inc	1% 0.5%	Revision
Commo	n to %	50%+dis	100+%	100+% ind	Adv	percent

Convert these percents to common fractions

1)
$$82\% = \frac{82}{100}$$

6)
$$9\% = \frac{9}{100}$$

$$^{2)}$$
 38% = $\frac{38}{100}$

⁷⁾
$$36\% = \frac{36}{100}$$

$$5\% = \frac{5}{100}$$

8)
$$18\% = \frac{18}{100}$$

4)
$$69\% = \frac{69}{100}$$

9)
$$8\% = \frac{8}{100}$$

5)
$$13\% = \frac{13}{100}$$

10) 93% =
$$\frac{93}{100}$$

Convert these percents to decimals

$$^{11)}$$
 $21\% = 0.21$

$$2\% = 0.02$$

$$71\% = 0.71$$

$$1\% = 0.01$$

$$^{13)}$$
 $28\% = 0.28$

$$60\% = 0.6$$

$$33\% = 0.33$$

$$12\% = 0.12$$

$$50\% = 0.5$$

$$96\% = 0.96$$

Percent:

With decimal fractions, take care to convert tenths to hundredths before converting to a percent.

$$0.6 \pm 0.60 \text{ or } 60\%$$

Convert these common fractions to percents

$$\frac{40}{100} = 40\%$$

$$\frac{60}{100} = 60\%$$

$$\frac{91}{100} = 91\%$$

$$\frac{44}{100} = 44\%$$

$$\frac{23)}{100} = 2\%$$

$$\frac{51}{100} = 51\%$$

$$\frac{88}{100} = 88\%$$

$$\frac{16}{100} = 16\%$$

$$\frac{15}{100} = 15\%$$

$$\frac{8}{100} = 8\%$$

Convert these decimals to percents

$$0.23 = 23\%$$

$$0.21 = 21\%$$

$$0.42 = 42\%$$

$$0.8 = 80\%$$

$$0.04 = 4\%$$

$$0.71 = 71\%$$

$$0.03 = 3\%$$

$$0.12 = 12\%$$

$$0.9 = 90\%$$

$$0.43 = 43\%$$

Insert <, > or =

$$\frac{3}{12} < \frac{4}{6}$$

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

$$\frac{2}{3} < \frac{10}{4}$$

$$\frac{6}{4} > \frac{2}{3}$$

$$4\frac{1}{6} = \frac{25}{6}$$

$$\frac{1}{3} > \frac{2}{9}$$

$$\frac{2}{5} > \frac{3}{10}$$

$$\frac{8}{6} = \frac{8}{12}$$

Addition revision

9)
$$10 + 7 = 17$$

9)
$$10 + 7 = 17$$
 $13) 5 + 4 = 9$

14)
$$4 + 7 = 11$$

11)
$$1 + 4 = 5$$

15)
$$1 + 6 = 7$$

12)
$$3 + 5 = 8$$

16)
$$5 + 9 = 14$$

Subtraction revision

22)
$$13 - 8 = 5$$

23)
$$11 - 5 = 6$$

24)
$$12 - 5 = 7$$

Name: Percent: Score: 1 [D]



% Intro	10%+dis	25%+dis	10%	50% inc	1% 0.5%	Revision
Comm	non to %	50%+dis	100+%	100+% inc	Adv	percent

Convert these percents to common fractions

1)
$$85\% = \frac{85}{100}$$

6)
$$3\% = \frac{3}{100}$$

$$^{2)}$$
 33 % = $\frac{33}{100}$

7) 31 % =
$$\frac{31}{100}$$

$$^{3)}$$
 10 % = $\frac{10}{100}$

8) 14 % =
$$\frac{14}{100}$$

4) 61% =
$$\frac{61}{100}$$

$$^{9)}$$
 5% = $\frac{5}{100}$

5)
$$18\% = \frac{18}{100}$$

10) 91 % =
$$\frac{91}{100}$$

Convert these percents to decimals

$$7\% = 0.07$$

$$70\% = 0.7$$

$$3\% = 0.03$$

$$20\% = 0.2$$

$$64\% = 0.64$$

$$^{14)}$$
 31% = 0.31

$$^{19)}$$
 $11\% = 0.11$

$$57\% = 0.57$$

$$93\% = 0.93$$

Convert these common fractions to percents

$$\frac{47}{100} = 47 \%$$

$$\frac{70}{100} = 70\%$$

$$\frac{94}{100} = 94\%$$

$$\frac{45}{100} = 45\%$$

$$\frac{6}{100} = 6\%$$

$$\frac{52}{100} = 52\%$$

$$\frac{86}{100} = 86 \%$$

$$\frac{19}{100} = 19 \%$$

$$\frac{12}{100} = 12 \%$$

$$\frac{7}{100} = 7\%$$

Convert these decimals to percents

$$0.73 = 73\%$$

$$0.26 = 26\%$$

$$0.12 = 12\%$$

$$0.7 = 70\%$$

$$0.06 = 6\%$$

$$0.21 = 21\%$$

$$0.08 = 8\%$$

$$0.1 = 10\%$$

$$0.01 = 1\%$$

$$0.9 = 90\%$$

Insert <. > or =

¹⁾
$$4\frac{5}{6} < \frac{45}{6}$$

$$\frac{2}{3} = \frac{2}{3}$$

$$\frac{2}{4} < \frac{9}{4}$$

$$\frac{10)}{3} > 1\frac{4}{3}$$

$$^{2)}$$
 $2\frac{1}{3} \leq \frac{8}{3}$

$$\frac{5)}{12} > \frac{1}{6}$$

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

$$\frac{11)}{4} > \frac{9}{5}$$

$$\frac{6}{9} > \frac{2}{12}$$

$$^{6)}$$
 $4\frac{1}{9} = \frac{37}{9}$

9)
$$\frac{6}{4} < \frac{13}{5}$$

$$\frac{12)}{4} < \frac{6}{4}$$

Addition revision

13)
$$8 + 4 = 12$$

13)
$$8 + 4 = 12$$
 18) $3 + 9 = 12$

20)
$$5 + 8 = 13$$

17)
$$10 + 7 = 17$$

Subtraction revision

29)
$$9 - 7 = 2$$

30)
$$8 - 6 = 2$$

26)
$$5 - 3 = 2$$
 31) $10 - 6 = 4$

31)
$$10 - 6 = 4$$

27)
$$7 - 3 = 4$$

32)
$$16 - 9 = 7$$