

## Lesson 3: Equivalent Fractions - smaller denominator

**Time allowed:** 30 mins

**Worksheets:** 7-9

**Intended outcomes:**

- For the student to be able to find equivalent fractions with smaller denominators.
- Students can identify from either the numerator or denominator which has changed, and what the missing element will be.

**Curriculum standards:**

- US 3.NF.3ab Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size  
 4.NF.1 Explain why a fraction  $a/b$  is equivalent to a fraction  $(n \times a)/(n \times b)$  by using visual fraction model:
- Aust ACMNA077 Investigate equivalent fractions used in contexts
- UK LKS2yr3 recognise and show, using diagrams, equivalent fractions with small denominator  
 LKS2yr4 recognise and show, using diagrams, families of common equivalent fraction

**Pre-req**



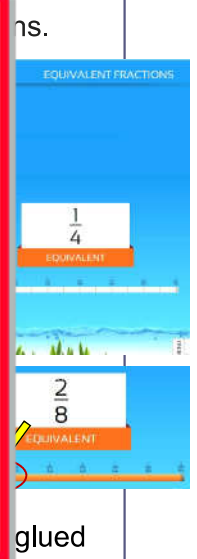
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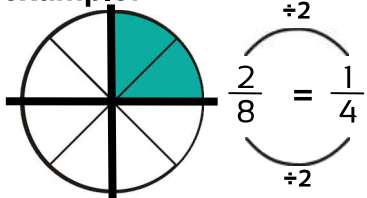


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together to make new (smaller) numerator and denominator.
- e) Repeat with other fractions that can be simplified. Notice the denominators which the app makes available. Once several examples have been given, students should notice that these denominators are common factors or multiples of both the numerator and the denominator once .
- f) Display fractions from **Worksheet 7** so that students are able to see what is happening as the smaller equivalent fractions are found, using the **Glue tool** just once.
- g) Work through various examples from **Worksheet 8** using the **Glue tool** multiple times to demonstrate how equivalent fractions with smaller denominators can be created.

Name \_\_\_\_\_

## Equivalent Fractions - Grouping 2 Fractional Pieces

Equivalent fractions  
example:



Draw lines to group 2 fractional pieces together to make new fractions. (divide the numerator and denominator by 2)

Write the equivalent fraction that each shape now shows.

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1)

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

5)  $\frac{6}{18} = \frac{\square}{\square}$

8)  $\frac{10}{12} = \frac{\square}{\square}$

3)  $\frac{14}{20} = \frac{\square}{\square}$

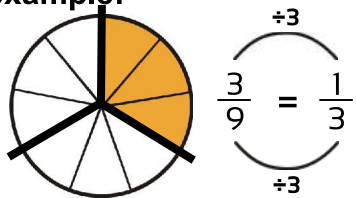
6)  $\frac{16}{18} = \frac{\square}{\square}$

9)  $\frac{4}{20} = \frac{\square}{\square}$

Name \_\_\_\_\_

## Equivalent Fractions - Grouping 3 Fractional Pieces

Equivalent fractions  
example:



Draw lines to group 3 fractional pieces together to make new fractions. (divide the numerator and denominator by 3)

Write the equivalent fraction that each shape now shows.

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2)

$$\frac{9}{18} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$$

5)

$$\frac{6}{18} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$$

8)

$$\frac{18}{24} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$$

3)

$$\frac{6}{24} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$$

6)

$$\frac{15}{18} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$$

9)

$$\frac{3}{18} = \frac{\boxed{\phantom{000}}}{\boxed{\phantom{000}}}$$