



Unit 2, Week 2, Lesson 1

## Equivalent fractions (I)

Recognise and show, using diagrams, families of common equivalent fractions







Example



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


Draw these diagrams and write the fraction equivalent to a half. Underneath write  $\frac{1}{2} = \frac{\quad}{\quad}$

a  b 



c  d 

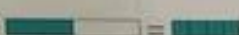

1 Write the fractions equivalent to a half.



Example







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



a  =   $\frac{1}{2} = \frac{\quad}{\quad}$


b  =   $\frac{1}{2} = \frac{\quad}{\quad}$

c  =   $\frac{1}{2} = \frac{\quad}{\quad}$

d  =   $\frac{1}{2} = \frac{\quad}{\quad}$

e  =   $\frac{1}{2} = \frac{\quad}{\quad}$




f  =   $\frac{1}{2} = \frac{\quad}{\quad}$



2 Continue this pattern:  $\frac{1}{2} = \frac{2}{4} = \frac{\quad}{6} = \frac{\quad}{\quad}$

**Challenge 3**

1 Write in the fractions equivalent to a quarter.

a  b  c 


2 Continue the pattern without the diagrams. Stop at 48ths.

3 What do you notice about all of the equivalent fractions?


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## Equivalent Fractions (2)

Recognise and show, using diagrams, families of common equivalent fractions

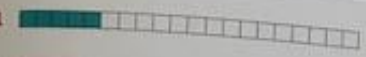



**Example**




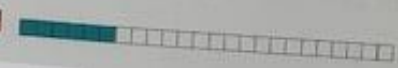
$$\frac{1}{4} = \frac{2}{8}$$

Draw these diagrams and write the fraction equivalent to a quarter. Underneath write  $\frac{1}{4} = \frac{\square}{\square}$

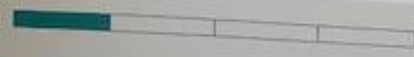
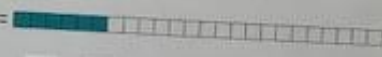
a 

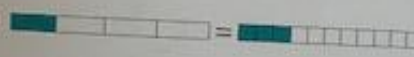
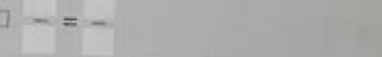
c 



b 


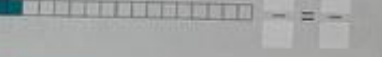
d 

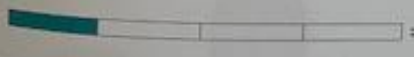
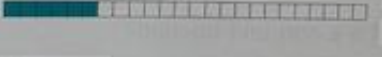
**1 Write the fractions equivalent to a quarter.**

a  =  =  $\frac{\square}{\square}$

b  =  =  $\frac{\square}{\square}$

c  =  =  $\frac{\square}{\square}$


d  =  =  $\frac{\square}{\square}$


e  =  =  $\frac{\square}{\square}$


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

**2 Continue this pattern:**  $\frac{1}{4} = \frac{2}{8} = \frac{\square}{12} =$

**1 Write the fractions equivalent to three-quarters.**


a 

b 

c 

**2 Continue this pattern:**  $\frac{3}{4} = \frac{6}{8} = \frac{\square}{12} =$

**3 Explain the pattern.**



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Day 3:

Write 3 equivalent fractions to each of these fractions.

1.  $\frac{1}{2} =$

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

3.  $\frac{3}{4} =$

4.  $\frac{4}{5} =$

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

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

7.  $\frac{3}{10} =$

8.  $\frac{7}{8} =$

9.  $\frac{1}{6} =$

10.  $\frac{11}{12} =$

11.  $\frac{1}{5} =$

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

13.  $\frac{5}{12} =$

14.  $\frac{1}{10} =$

15.  $\frac{2}{5} =$


16.  $\frac{1}{8} =$

Day 4:

Unit 10, Week 2, Lesson 1

## Equivalent fractions (3)

Use factors and multiples to recognise equivalent fractions and simplify fractions

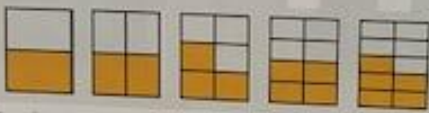



**Challenge 1**

1 Continue the equivalent fraction pattern.

a  $\frac{1}{2} = \frac{\quad}{4} = \frac{\quad}{6} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

b  $\frac{1}{4} = \frac{\quad}{8} = \frac{\quad}{12} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

2 Explain what an equivalent fraction is.

**Challenge 2**

1 Continue the equivalent fraction pattern.

a  $\frac{1}{5} = \frac{\quad}{10} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

b  $\frac{1}{6} = \frac{\quad}{12} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

c  $\frac{1}{7} = \frac{\quad}{14} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

d  $\frac{1}{8} = \frac{\quad}{16} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

2 Simplify these fractions.

a  $\frac{9}{18}$  b  $\frac{6}{24}$  c  $\frac{7}{28}$  d  $\frac{8}{40}$  e  $\frac{9}{54}$  f  $\frac{6}{18}$

g  $\frac{8}{56}$  h  $\frac{6}{60}$  i  $\frac{4}{48}$  j  $\frac{9}{45}$  k  $\frac{7}{77}$  l  $\frac{20}{70}$

**Challenge 3**

1 Continue the equivalent fraction pattern for these non-unit fractions.

a  $\frac{2}{3} = \frac{\quad}{6} = \frac{\quad}{9} = \frac{\quad}{12} = \frac{\quad}{15} = \frac{\quad}{18}$


b  $\frac{3}{5} = \frac{\quad}{6} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad} = \frac{\quad}{\quad}$

2 Simplify these fractions.

a  $\frac{12}{60}$  b  $\frac{10}{18}$  c  $\frac{15}{25}$  d  $\frac{36}{42}$  e  $\frac{20}{50}$

f  $\frac{32}{36}$  g  $\frac{54}{90}$  h  $\frac{44}{99}$  i  $\frac{12}{21}$  j  $\frac{14}{35}$

3 Explain why  $\frac{12}{25}$  cannot be simplified?



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Ron has two strips of the same sized paper.

He folds the strips into different sized fractions.

He shades in three equal parts on one strip and six equal parts on the other strip.

The shaded areas are equal.

What fractions could he have folded his strips into?

Rosie says,

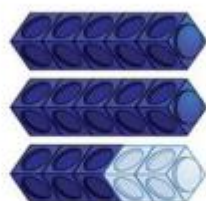


$\frac{16}{4}$  is greater than  $\frac{8}{2}$   
because 16 is greater than 8

Do you agree?

Explain why.

Spot the mistake.



$$\frac{13}{5} = 10 \text{ wholes and } 3 \text{ fifths}$$

Tommy is finding equivalent fractions.

$$\frac{3}{4} = \frac{5}{6} = \frac{7}{8} = \frac{9}{10}$$

He says,



I did the same thing to the numerator and the denominator so my fractions are equivalent.

Do you agree with Tommy?

Explain your answer.

How many equivalent fractions can you see in this picture?



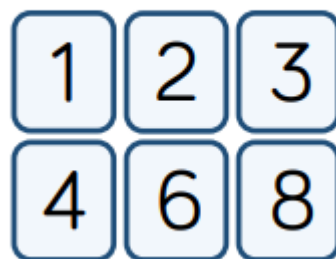
Eva says,



I know that  $\frac{3}{4}$  is equivalent to  $\frac{3}{8}$  because the numerators are the same.

Is Eva correct?

Use the digit cards to complete the equivalent fractions.



$$\frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}} = \frac{\boxed{\phantom{00}}}{\boxed{\phantom{00}}}$$

How many different ways can you find?