MATHS – Lesson 1 – Equivalent Fractions

Equivalent fractions (1)

White Rose Maths
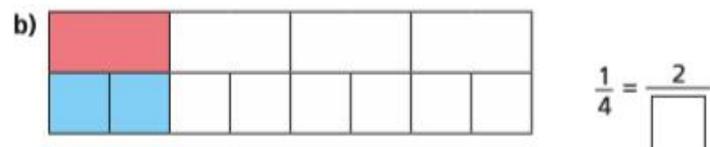
1 Shade the bar models to represent the fractions.

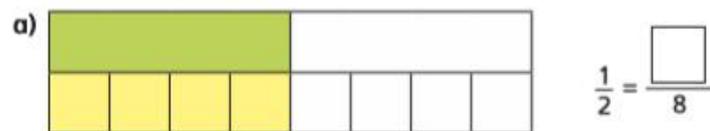a) Shade $\frac{1}{2}$ of the bar model.
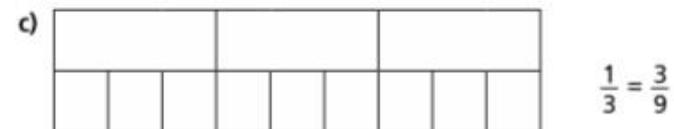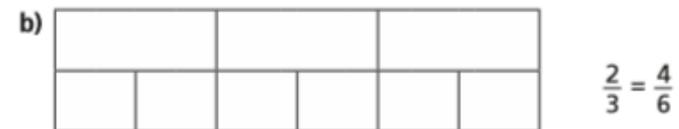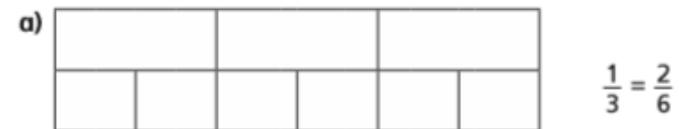
b) Shade $\frac{2}{4}$ of the bar model.

What do you notice?

2 Complete the equivalent fractions.

a)

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

b)

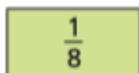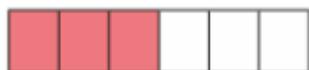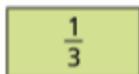$$\frac{1}{4} = \frac{2}{\square}$$

c)

$$\frac{3}{4} = \frac{6}{\square}$$

3 Shade the bar models to represent the equivalent fractions.

a)

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

b)

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

c)

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

d)

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

Can you find any more equivalent fractions using the bar models?

4 Match each bar model to its equivalent fraction.

$\frac{1}{2}$

$\frac{1}{3}$

$\frac{1}{4}$

$\frac{1}{8}$
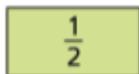
5 Shade the bar models to complete the equivalent fractions.

a)

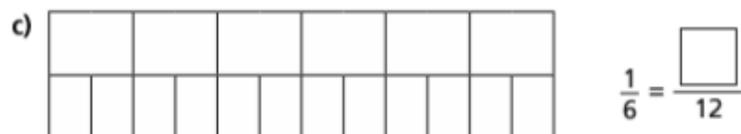$\frac{1}{2} = \frac{\boxed{}}{12}$

b)

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

c)

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

6 The bar models represent fractions.
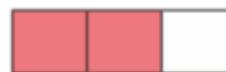
A
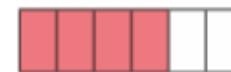
C
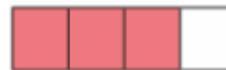
B
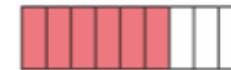
D

Which is the odd one out? _____

Why do you think this?

7 This bar model represents $\frac{3}{4}$
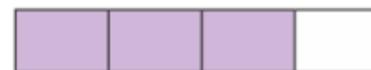
Tick the bar models that can be used to show a fraction that is equivalent to $\frac{3}{4}$

Shade the bar models to support your answers.

☐

☐

☐

Talk to a partner about your answers.

MATHS – Lesson 2 – Equivalent Fractions

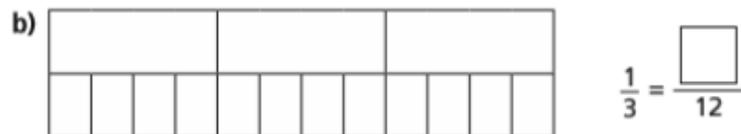### Equivalent fractions (2)

1 Shade the bar models to represent the fractions.

a) Shade $\frac{1}{2}$ of the bar model.

b) Shade $\frac{2}{4}$ of the bar model.

c) Shade $\frac{3}{6}$ of the bar model.

d) What do you notice?

e) Write another fraction that is equivalent to $\frac{1}{2}$

2 Shade $\frac{2}{3}$ of each bar model.

a)

b)

c)

d) Use your answers to parts a), b) and c) to complete the equivalent fractions.

$$\frac{2}{3} = \frac{\square}{6} = \frac{8}{\square} = \frac{\square}{15}$$

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3 Mo is finding equivalent fractions.

0    $\frac{1}{5}$ $\frac{2}{5}$ $\frac{3}{5}$ $\frac{4}{5}$ 1

0    $\frac{1}{5}$ $\frac{2}{5}$ $\frac{3}{5}$ $\frac{4}{5}$ 1
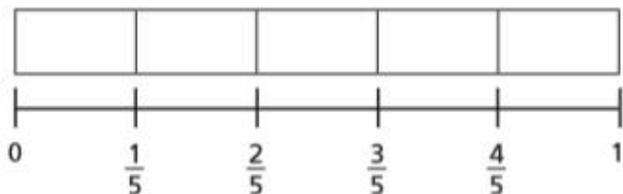
$\frac{6}{8}$ is equivalent to $\frac{4}{5}$

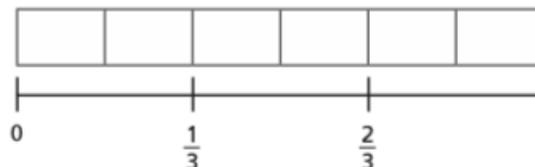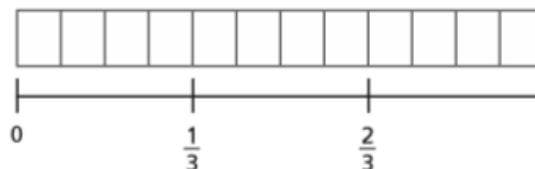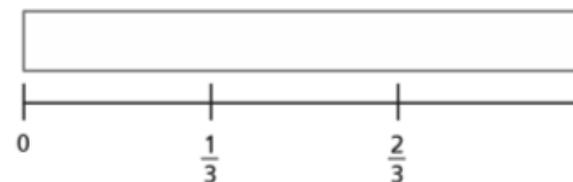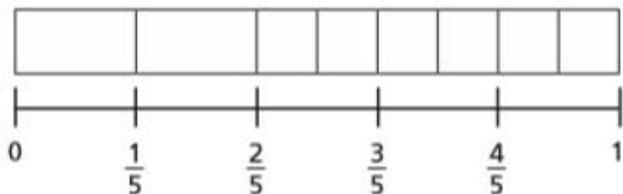Do you agree with Mo? _____

Explain your answer.

4 Find the missing numbers.

a)

0    $\frac{2}{14}$ $\frac{4}{14}$ $\frac{\square}{14}$ $\frac{8}{14}$ $\square$ $\square$ $\frac{14}{14}$

0    $\frac{1}{7}$ $\square$ $\frac{3}{7}$ $\frac{4}{7}$ $\square$ $\square$ $\square$

b)

$\square$ $\frac{9}{\square}$ $\square$ $\square$

0    $\frac{\square}{15}$ $\frac{\square}{15}$

0    $\frac{1}{5}$ $\frac{2}{5}$ $\frac{3}{5}$ $\frac{4}{5}$ $\frac{5}{5}$ $\frac{6}{5}$
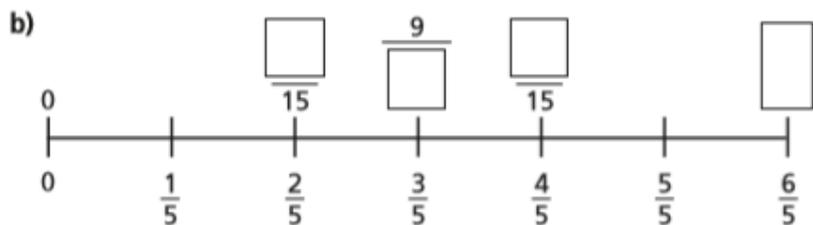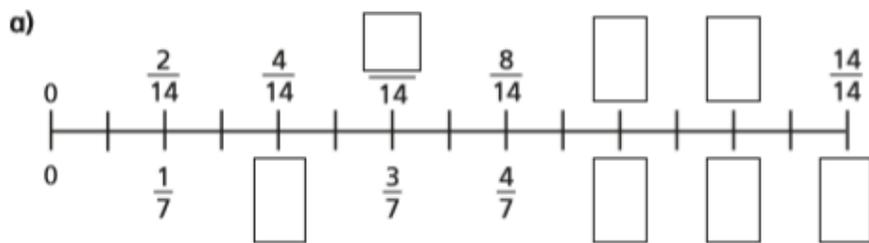
5 Here is a number line.

0   1

a) What fraction is each shape pointing to?

△ = $\square$ ■ = $\square$

b) A circle is halfway between the triangle and the square.

Draw the circle on the number line.

c)

The circle is pointing to $\frac{9}{21}$

Do you agree with Eva? _____

Show how you worked this out.

d) Write three equivalent fractions for each shape.

△ $\square$ $\square$ $\square$ ● $\square$ $\square$ $\square$

■ $\square$ $\square$ $\square$

Compare answers with a partner.

MATHS – Lesson 3 – Equivalent Fractions

Equivalent fractions (3)

1 Shade the shapes to help you complete the equivalent fractions.

a)

$\frac{1}{3} = \frac{\square}{\square}$
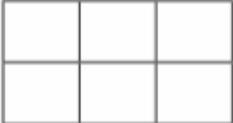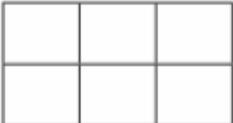
b)

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

c)

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

d)

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

2 Use the fraction wall to complete the equivalent fractions.

$\frac{1}{3}$		$\frac{1}{3}$		$\frac{1}{3}$	
$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$	$\frac{1}{6}$
$\frac{1}{9}$ $\frac{1}{9}$ $\frac{1}{9}$		$\frac{1}{9}$ $\frac{1}{9}$ $\frac{1}{9}$		$\frac{1}{9}$ $\frac{1}{9}$ $\frac{1}{9}$	

a) $\frac{1}{3} = \frac{\square}{6}$

d) $\frac{2}{3} = \frac{6}{\square}$

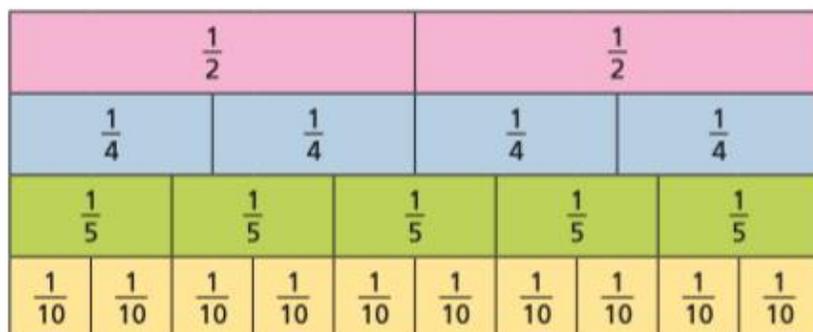b) $\frac{1}{3} = \frac{\square}{9}$

e) $\frac{4}{6} = \frac{6}{\square}$

c) $\frac{2}{3} = \frac{4}{\square}$

f) $\frac{1}{3} = \frac{\square}{6} = \frac{\square}{9}$

3 Draw a picture to show that one quarter is equivalent to two eighths.

4 Use the fraction wall to decide whether the fractions are equivalent or not.

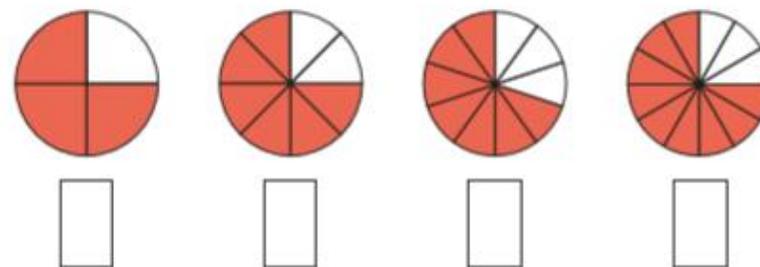| $\frac{1}{2}$				$\frac{1}{2}$			
$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$		$\frac{1}{4}$	
$\frac{1}{5}$	$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$		$\frac{1}{5}$
$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$	$\frac{1}{10}$

Complete the sentences using **is** or **is not**.

a) $\frac{1}{2}$ _____ equivalent to $\frac{2}{4}$

b) $\frac{1}{4}$ _____ equivalent to $\frac{2}{10}$

c) $\frac{1}{2}$ _____ equivalent to $\frac{5}{10}$

d) $\frac{3}{10}$ _____ equivalent to $\frac{2}{5}$

e) $\frac{4}{5}$ _____ equivalent to $\frac{8}{10}$

f) $\frac{3}{4}$ _____ equivalent to $\frac{4}{5}$

Write some sentences of your own and ask a partner to fill in the gaps.

5 a) What fraction of each shape is shaded?

☐   ☐   ☐   ☐

b) Use the fractions in part a) to complete the sentences.

☐ is equivalent to ☐

☐ is equivalent to ☐

☐ is not equivalent to ☐

☐ is not equivalent to ☐

Compare answers with a partner.

6 The bar model represents $\frac{1}{2}$
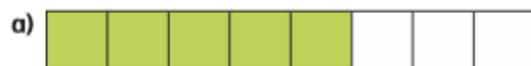
Write as many equivalent fractions as you can.

What is the same about all the fractions you have written?

MATHS – Lesson 4 – Compare Fractions

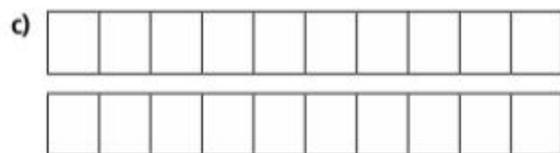**Compare fractions**

I Write <, > or = to compare the fractions.

Use the bar models to help you.

a)

$\frac{5}{8}$ ◯ $\frac{3}{8}$

b)

$\frac{5}{8}$ ◯ $\frac{7}{8}$

c)

$\frac{5}{10}$ ◯ $\frac{7}{10}$

2 Write <, > or = to compare the fractions.

a) $\frac{1}{5}$ ◯ $\frac{3}{5}$ d) $\frac{6}{7}$ ◯ $\frac{2}{7}$

b) $\frac{2}{5}$ ◯ $\frac{2}{5}$ e) $\frac{6}{13}$ ◯ $\frac{12}{13}$

c) $\frac{2}{7}$ ◯ $\frac{6}{7}$ f) $\frac{13}{15}$ ◯ $\frac{13}{15}$

3 Here are some bar models.

$\frac{1}{2}$

$\frac{1}{3}$

$\frac{1}{4}$

$\frac{1}{5}$

a) Shade the bar models to represent the fractions.

b) Write < or > to compare the fractions.

Use the bar models to help you.

$\frac{1}{2}$ ◯ $\frac{1}{3}$ $\frac{1}{4}$ ◯ $\frac{1}{3}$ $\frac{1}{5}$ ◯ $\frac{1}{3}$

$\frac{1}{3}$ ◯ $\frac{1}{2}$ $\frac{1}{4}$ ◯ $\frac{1}{5}$ $\frac{1}{5}$ ◯ $\frac{1}{2}$

4 What could the missing numerators and denominators be?

Give three examples for each.

a) $\frac{1}{5} < \frac{\square}{5}$ $\frac{1}{5} < \frac{\square}{5}$ $\frac{1}{5} < \frac{\square}{5}$

b) $\frac{1}{5} < \frac{1}{\square}$ $\frac{1}{5} < \frac{1}{\square}$ $\frac{1}{5} < \frac{1}{\square}$

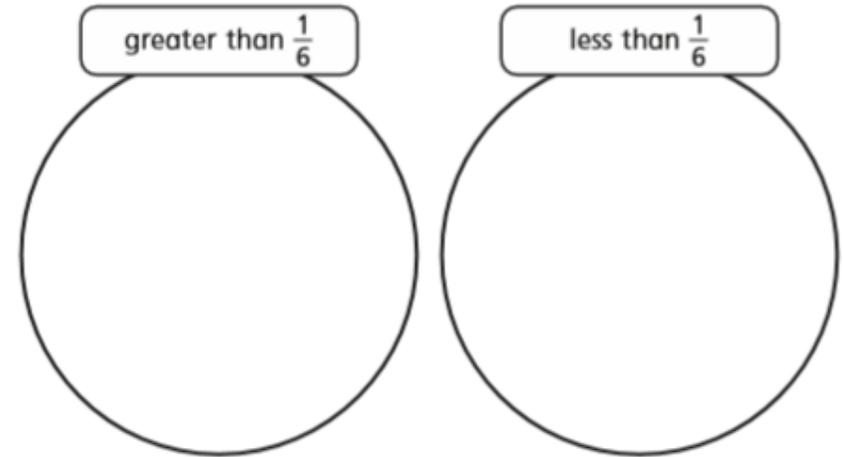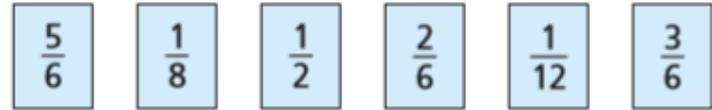**5** Jack is comparing fractions.

$\frac{1}{8}$ is greater than $\frac{1}{4}$ because 8 is greater than 4

Draw bar models to show that Jack is wrong.

6 Sort the fractions into the circles.

$\frac{5}{6}$ $\frac{1}{8}$ $\frac{1}{2}$ $\frac{2}{6}$ $\frac{1}{12}$ $\frac{3}{6}$

greater than $\frac{1}{6}$

less than $\frac{1}{6}$

7 Complete the sentences using the word bank.

(numerator)   (denominator)   (greater)   (smaller)

a) When fractions have the same denominator, the greater

the _____, the _____ the fraction.

b) When fractions have the same numerator, the greater the

_____, the _____ the fraction.