

# Equivalent fractions (2)

1 Shade the bar models to represent the fractions.

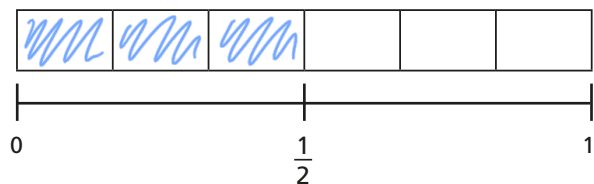
a) Shade  $\frac{1}{2}$  of the bar model.



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



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



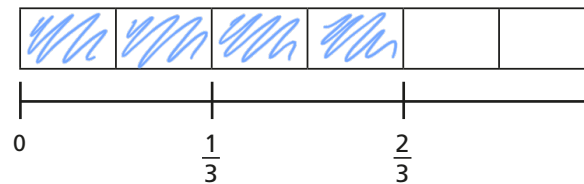
d) What do you notice?

e) Write another fraction that is equivalent to  $\frac{1}{2}$  e.g.  $\frac{4}{8}$

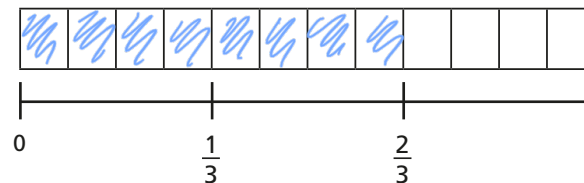


2 Shade  $\frac{2}{3}$  of each bar model.

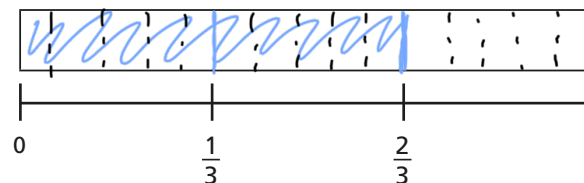
a)



b)



c)

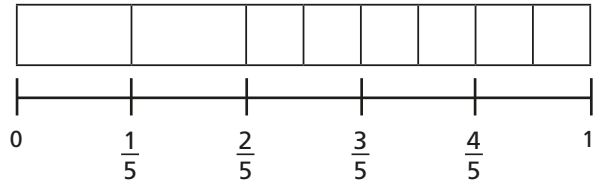
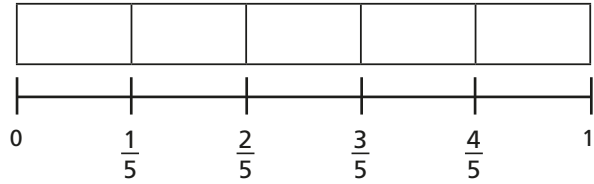


d) Use your answers to parts a), b) and c) to complete the equivalent fractions.

$$\frac{2}{3} = \frac{\boxed{4}}{6} = \frac{8}{\boxed{12}} = \frac{\boxed{10}}{15}$$



3 Mo is finding equivalent fractions.

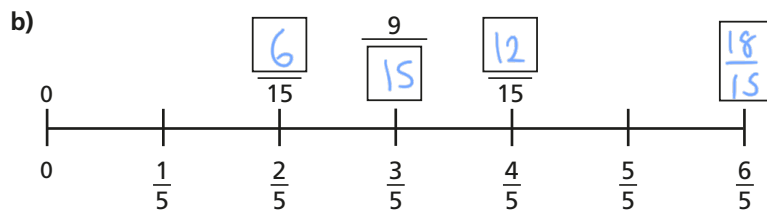
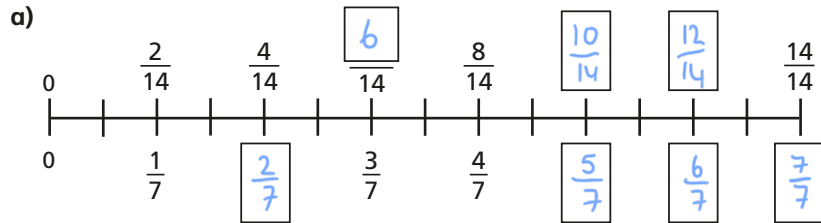


$\frac{6}{8}$  is equivalent to  $\frac{4}{5}$

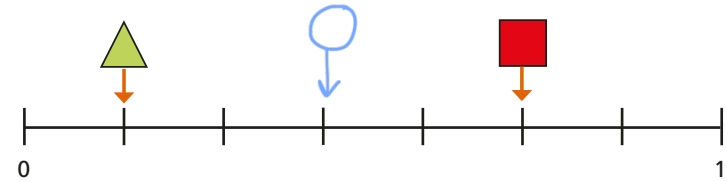
Do you agree with Mo? No

Explain your answer.

4 Find the missing numbers.



5 Here is a number line.



a) What fraction is each shape pointing to?

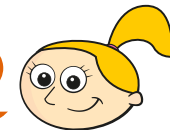
$\triangle = \frac{1}{7}$        $\square = \frac{5}{7}$

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

Draw the circle on the number line.

c)

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

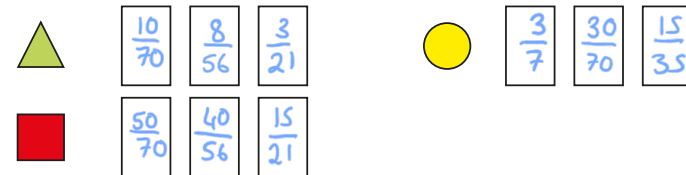


Do you agree with Eva? Yes

Show how you worked this out.

d) Write three equivalent fractions for each shape.

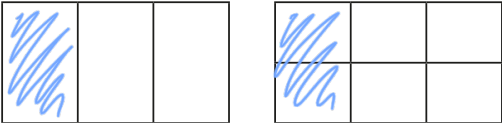
e.g.

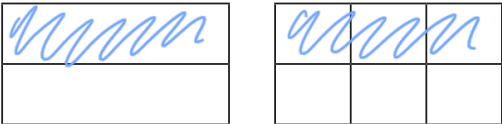


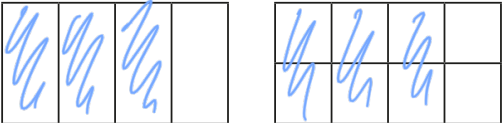
Compare answers with a partner.

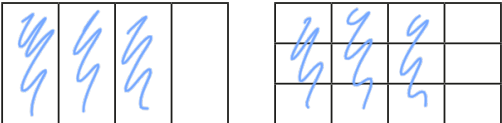
# Equivalent fractions (3)

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

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

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

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

d)   $\frac{3}{4} = \frac{9}{12}$



2 Use the fraction wall to complete the equivalent fractions.

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

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

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

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

e)  $\frac{4}{6} = \frac{6}{9}$

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

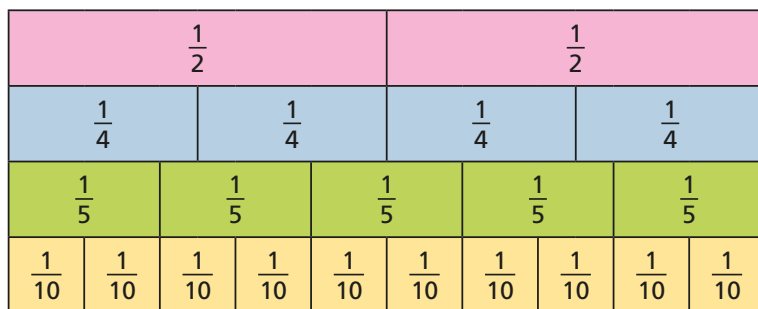
e)  $\frac{1}{3} = \frac{2}{6} = \frac{3}{9}$

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

e.g. 



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

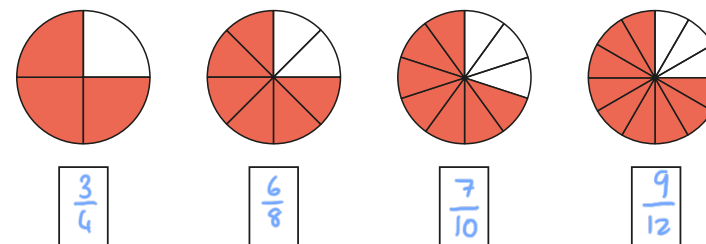


Complete the sentences using **is** or **is not**.

- a)  $\frac{1}{2}$  is equivalent to  $\frac{2}{4}$
- b)  $\frac{1}{4}$  is not equivalent to  $\frac{2}{10}$
- c)  $\frac{1}{2}$  is equivalent to  $\frac{5}{10}$
- d)  $\frac{3}{10}$  is not equivalent to  $\frac{2}{5}$
- e)  $\frac{4}{5}$  is equivalent to  $\frac{8}{10}$
- f)  $\frac{3}{4}$  is not 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.

e.g.  $\frac{3}{4}$  is equivalent to  $\frac{6}{8}$

$\frac{3}{4}$  is equivalent to  $\frac{9}{12}$

$\frac{6}{8}$  is not equivalent to  $\frac{7}{10}$

$\frac{7}{10}$  is not equivalent to  $\frac{3}{4}$

Compare answers with a partner.

- 6 The bar model represents  $\frac{1}{2}$

Write as many equivalent fractions as you can.

*Various answers.*

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

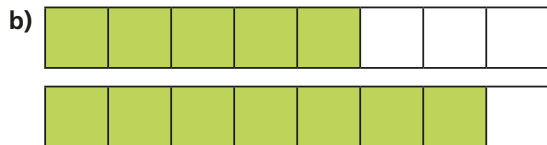


# Compare fractions

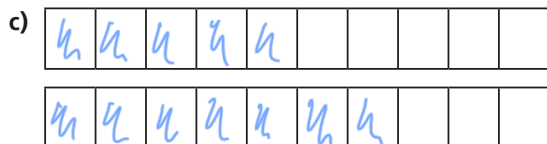
1 Write  $<$ ,  $>$  or  $=$  to compare the fractions.  
Use the bar models to help you.



$\frac{5}{8} > \frac{3}{8}$



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



$\frac{5}{10} < \frac{7}{10}$

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

a)  $\frac{1}{5} < \frac{3}{5}$

d)  $\frac{6}{7} > \frac{2}{7}$

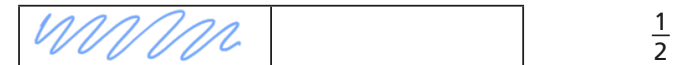
b)  $\frac{2}{5} = \frac{2}{5}$

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.



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.

e.g. a)  $\frac{1}{5} < \frac{\boxed{2}}{5}$       $\frac{1}{5} < \frac{\boxed{3}}{5}$       $\frac{1}{5} < \frac{\boxed{4}}{5}$

b)  $\frac{1}{5} < \frac{1}{\boxed{4}}$       $\frac{1}{5} < \frac{1}{\boxed{3}}$       $\frac{1}{5} < \frac{1}{\boxed{2}}$

- 5 Jack is comparing fractions.

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

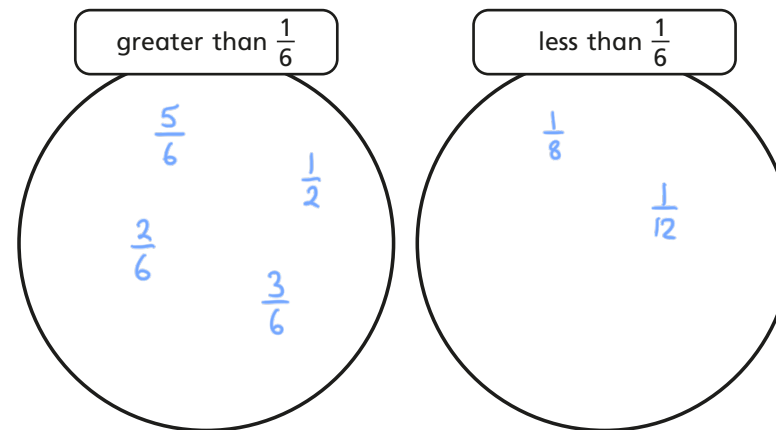
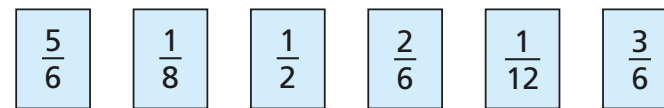


Draw bar models to show that Jack is wrong.

e.g.



- 6 Sort the fractions into the circles.



- 7 Complete the sentences using the word bank.

word bank: numerator, denominator, greater, smaller

- a) When fractions have the same denominator, the greater the numerator, the greater the fraction.
- b) When fractions have the same numerator, the greater the denominator, the smaller the fraction.



# Order fractions

1 a) Shade the bar models to represent the fractions.



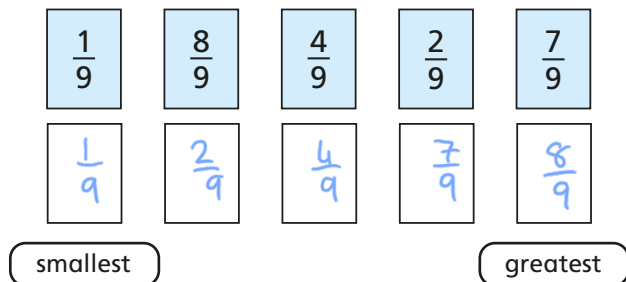
b) What do you notice?

c) Complete the sentence.

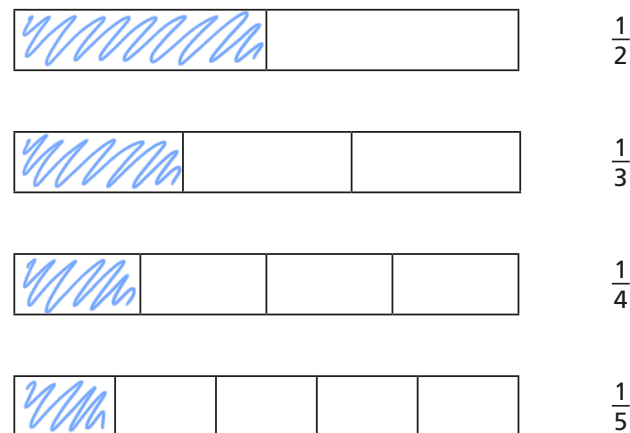
numerator    denominator    greater    smaller

When fractions have the same denominator, the greater the numerator the greater the fraction.

2 Write the fractions in order, starting with the smallest.



3 a) Shade the bar models to represent the fractions.



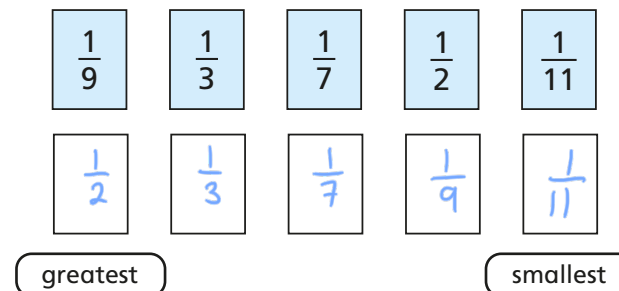
b) What do you notice?

c) Complete the sentence.

numerator    denominator    greater    smaller

When fractions have the same numerator, the greater the denominator the smaller the fraction.

4 Write the fractions in order, starting with the greatest.



5 Tommy and Dora are ordering fractions.

$$\frac{1}{5}$$

$$\frac{4}{15}$$

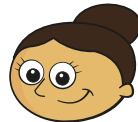
$$\frac{2}{3}$$

$$\frac{7}{15}$$



Tommy

I cannot order these fractions because the numerators and denominators are different.



Dora

I think I can use equivalent fractions to help me.

Who do you agree with? Dora

Talk about it with a partner.

6 a) Complete the equivalent fractions.

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

$$\frac{2}{9} = \frac{6}{27}$$

$$\frac{1}{7} = \frac{6}{42}$$

b) Write the fractions in order, starting with the greatest.

$$\frac{6}{9}$$

$$\frac{3}{5}$$

$$\frac{1}{7}$$

$$\frac{2}{9}$$

$$\frac{6}{9}$$

$$\frac{3}{5}$$

$$\frac{2}{9}$$

$$\frac{1}{7}$$

greatest

smallest

7 Dexter and Alex are ordering fractions from smallest to greatest.

$$\frac{1}{7}$$

$$\frac{2}{21}$$

$$\frac{4}{35}$$

$$\frac{2}{7}$$

a)



Dexter

I am going to make the numerators the same.

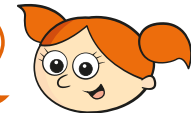
Use Dexter's method to put the fractions in order.

$$\frac{1}{7} = \frac{4}{28} \quad \frac{2}{21} = \frac{4}{42} \quad \frac{2}{7} = \frac{4}{14}$$

$$\frac{2}{21}, \frac{4}{35}, \frac{1}{7}, \frac{2}{7}$$

b)

I am going to make the denominators the same.



Alex

Use Alex's method to put the fractions in order.

$$\frac{1}{7} = \frac{15}{105} \quad \frac{2}{21} = \frac{10}{105} \quad \frac{4}{35} = \frac{12}{105} \quad \frac{2}{7} = \frac{30}{105}$$

$$\frac{2}{21}, \frac{4}{35}, \frac{1}{7}, \frac{2}{7}$$

c) Which method do you prefer? Talk about it with a partner.