Unit and non-unit fractions

1 Write fractions to complete the sentences.

a) $\frac{1}{3}$ of the counters are yellow.

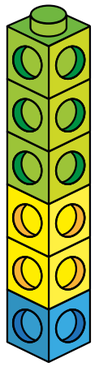
b) $\frac{2}{3}$ of the counters are red.

2 Write fractions to complete the sentences.

a) $\frac{3}{6}$ of the tower is green.

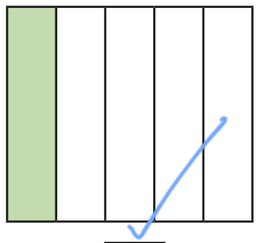
b) $\frac{2}{6}$ of the tower is yellow.

c) $\frac{1}{6}$ of the tower is blue.

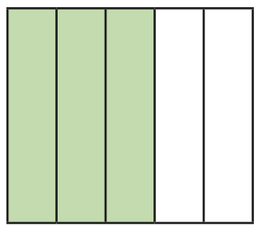


3 What fraction of each shape is shaded?

a)

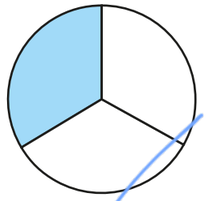


$\frac{1}{5}$

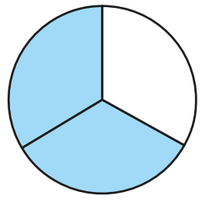


$\frac{3}{5}$

b)

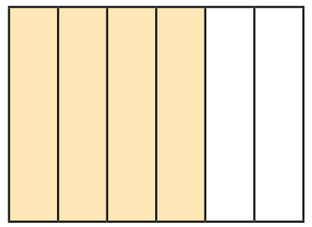


$\frac{1}{3}$

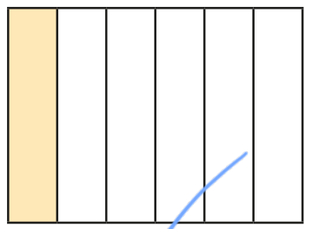


$\frac{2}{3}$

c)

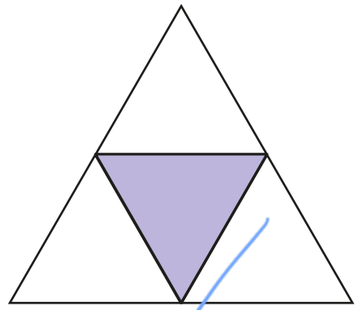


$\frac{4}{6}$

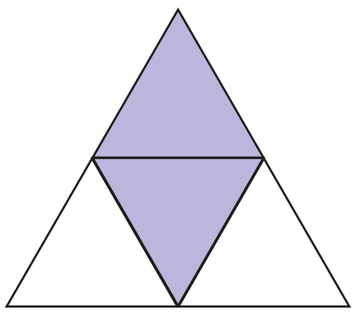


$\frac{1}{6}$

d)

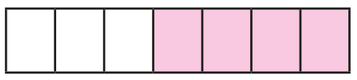


$\frac{1}{4}$



$\frac{2}{4}$

e)



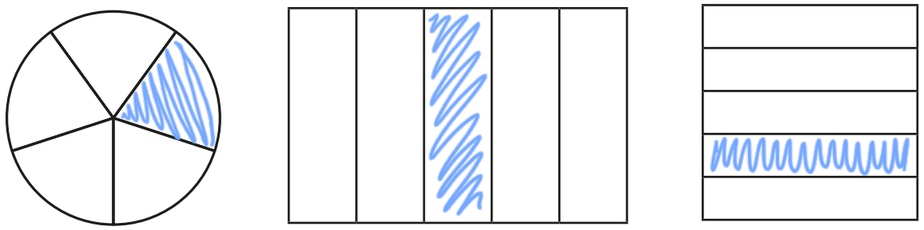
$\frac{4}{7}$

$\frac{1}{7}$

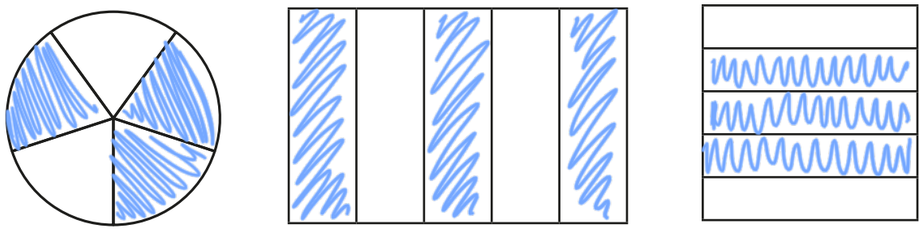
Tick the unit fraction in each pair of shapes.

How did you know which was the unit fraction?

4 **a)** Colour $\frac{1}{5}$ of each shape.

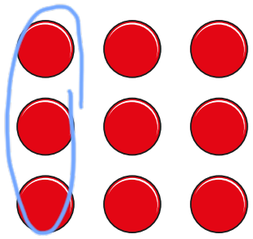


b) Colour $\frac{3}{5}$ of each shape.

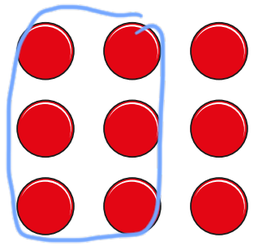


What is the same and what is different about your answers?

5 **a)** Circle $\frac{1}{3}$ of the counters.



b) Circle $\frac{2}{3}$ of the counters.



What is the same and what is different about your answers?

6 Write the fractions in the table.

$\frac{1}{6}$	$\frac{2}{3}$	$\frac{3}{4}$	$\frac{1}{10}$	$\frac{1}{8}$
$\frac{3}{5}$	$\frac{1}{4}$	$\frac{1}{99}$	$\frac{6}{1}$	$\frac{1}{250}$

Unit fractions	Non-unit fractions
$\frac{1}{6}$ $\frac{1}{4}$ $\frac{1}{99}$ $\frac{1}{10}$ $\frac{1}{8}$ $\frac{1}{250}$	$\frac{6}{1}$ $\frac{3}{4}$ $\frac{2}{3}$ $\frac{3}{5}$

Write two more examples of your own in each column.

7 **a)** What is a unit fraction? What is a non-unit fraction?

Talk about it with a partner.

b) Complete the sentences.

An example of a unit fraction is $\frac{1}{5}$

The numerator is always 1

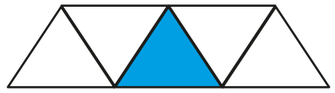
An example of a non-unit fraction is $\frac{3}{5}$

The numerator is always greater than 1

What is a fraction?

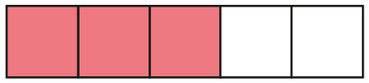
1 What fraction of each shape is shaded?

a)



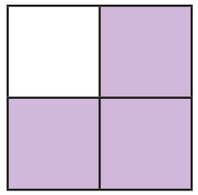
$\frac{1}{5}$

b)



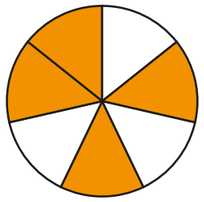
$\frac{3}{5}$

c)



$\frac{3}{4}$

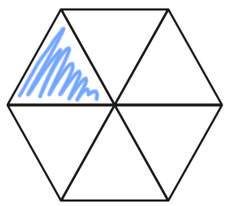
d)



$\frac{4}{7}$

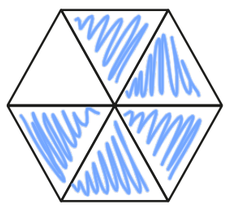
2 Shade each diagram to represent the fractions.

a)



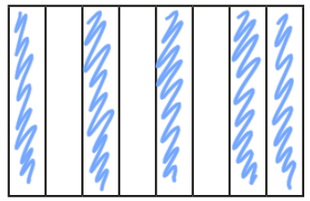
$\frac{1}{6}$

b)



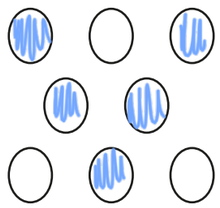
$\frac{5}{6}$

c)



$\frac{5}{8}$

d)



$\frac{5}{8}$

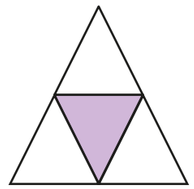
3 Circle the unit fractions.

$\frac{1}{3}$ $\frac{1}{5}$ $\frac{3}{5}$ $\frac{1}{8}$ $\frac{2}{3}$ $\frac{10}{11}$

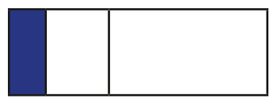
How do you know which are unit fractions?

4 **a)** Tick the shapes with one third shaded.

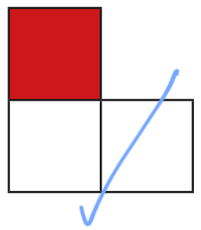
A



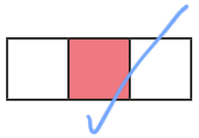
B



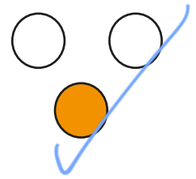
C



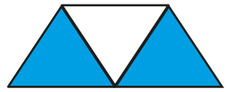
D



E



F



G

b) Complete the sentences to describe the shapes with one third shaded.

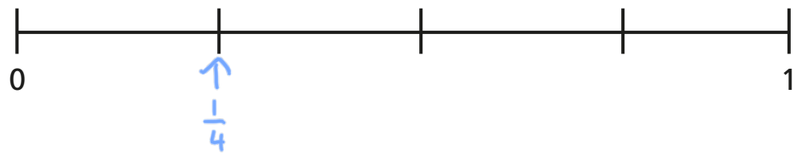
There are [3] equal parts altogether.

[1] out of [3] equal parts is shaded.

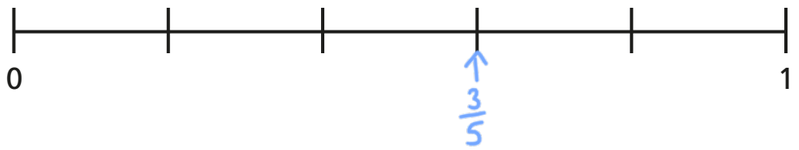
[$\frac{1}{3}$] of the shape is shaded.

5 Draw an arrow to show the position of the fraction on the number line.

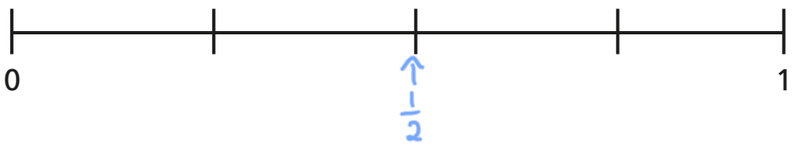
a) $\frac{1}{4}$



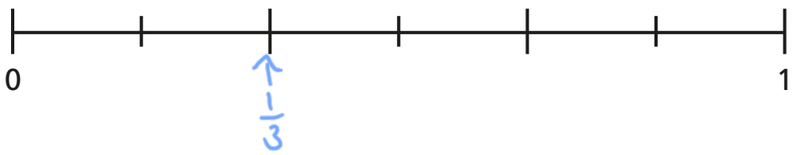
b) $\frac{3}{5}$



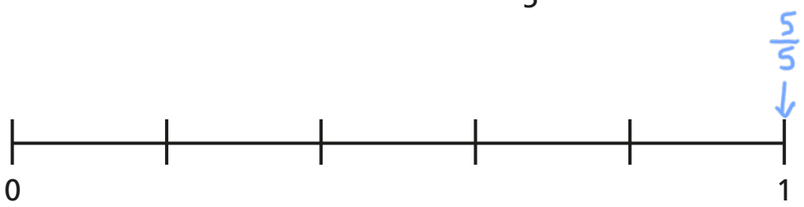
c) $\frac{1}{2}$



d) $\frac{1}{3}$



6 Draw an arrow to show the position of $\frac{5}{5}$ on the number line.

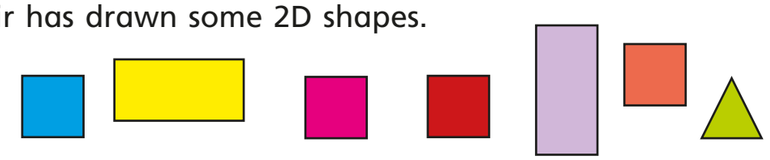


What do you notice?

7 Draw four different representations of $\frac{3}{4}$

Various answers e.g.

8 Amir has drawn some 2D shapes.



a) What fraction of the shapes are triangles?

1/7

b) What fraction of the shapes are squares?

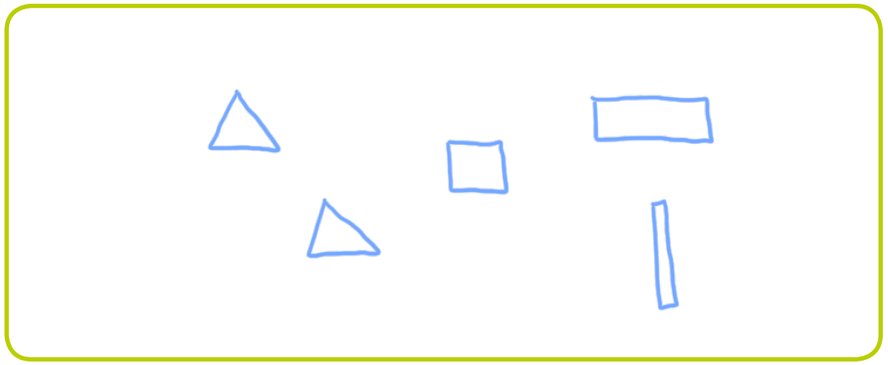
3/7

c) What fraction of the shapes have four sides?

6/7

d) Draw 2D shapes to match the description.

$\frac{1}{5}$ are squares, $\frac{2}{5}$ are triangles, $\frac{3}{5}$ have more than 3 sides.



Compare shapes with a partner.

What is the same about your shapes? Is anything different?

Equivalent fractions (1)

1 Shade the bar models to represent the fractions.

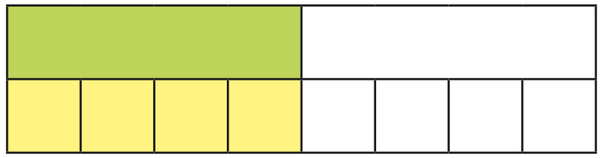
a) Shade $\frac{1}{2}$ of the bar model.

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

What do you notice?

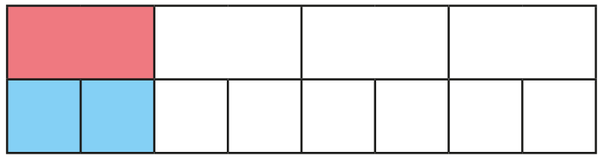
2 Complete the equivalent fractions.

a)



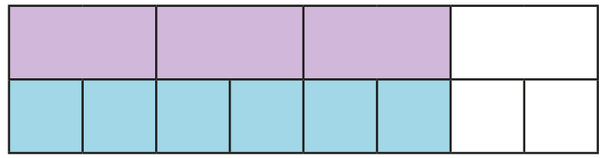
$\frac{1}{2} = \frac{\boxed{4}}{8}$

b)



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

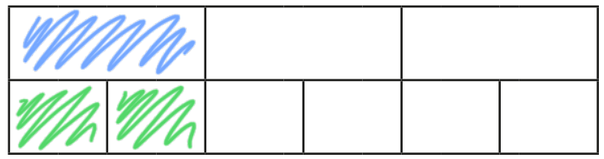
c)



$\frac{3}{4} = \frac{6}{\boxed{8}}$

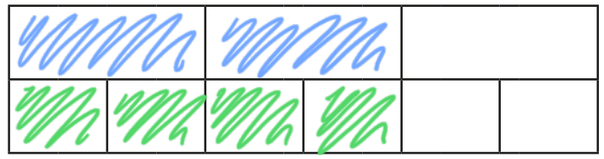
3 Shade the bar models to represent the equivalent fractions.

a)



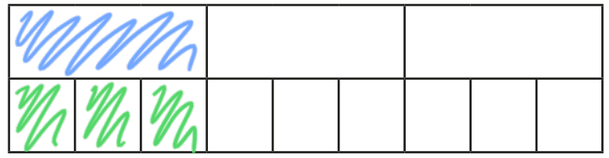
$\frac{1}{3} = \frac{2}{6}$

b)



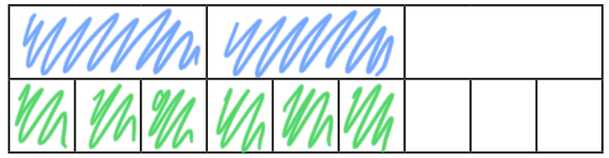
$\frac{2}{3} = \frac{4}{6}$

c)



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

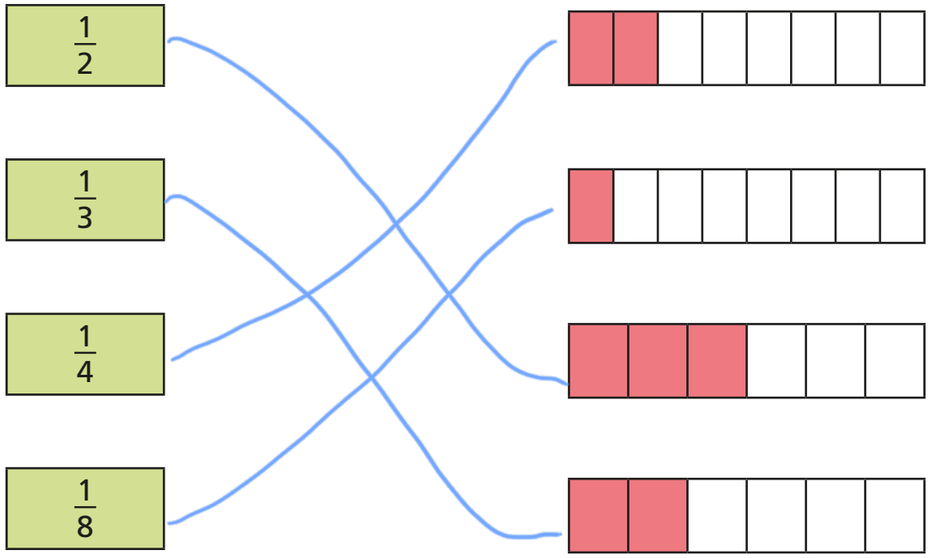
d)



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

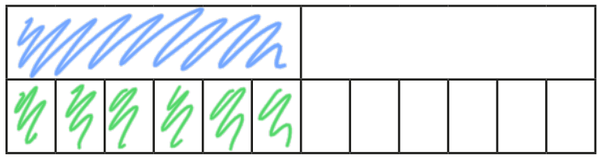
Can you find any more equivalent fractions using the bar models?

4 Match each bar model to its equivalent fraction.



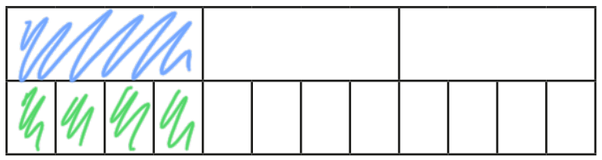
5 Shade the bar models to complete the equivalent fractions.

a)



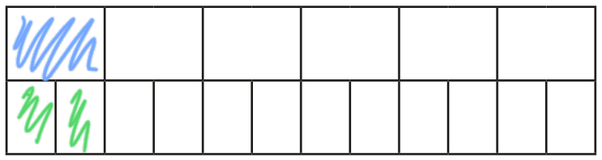
$\frac{1}{2} = \frac{6}{12}$

b)



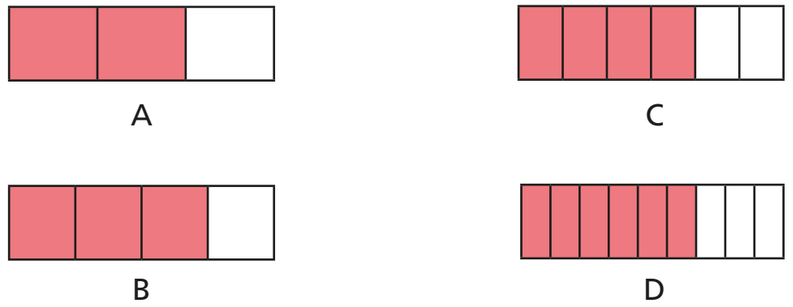
$\frac{1}{3} = \frac{4}{12}$

c)



$\frac{1}{6} = \frac{2}{12}$

6 The bar models represent fractions.



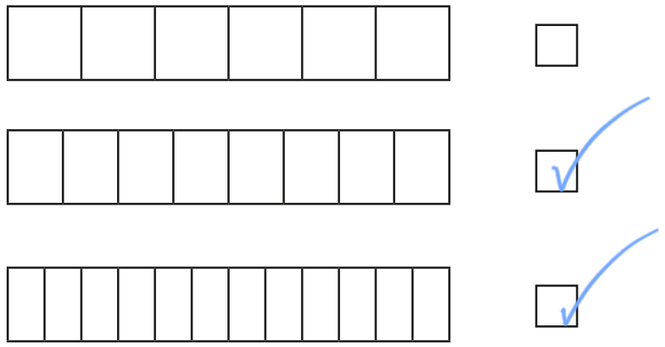
Which is the odd one out? B

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.

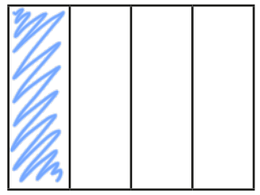


Talk to a partner about your answers.

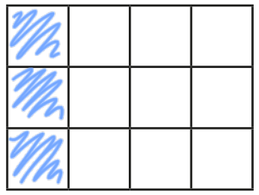
Equivalent fractions

1 Shade the shapes to show the equivalent fractions.

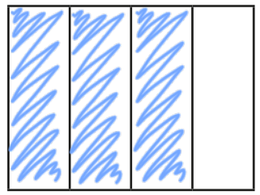
a)



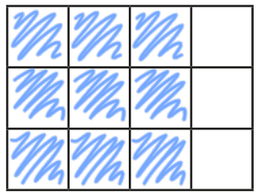
$\frac{1}{4} = \frac{3}{12}$



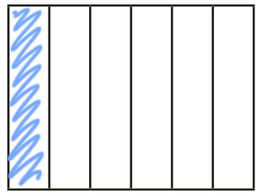
b)



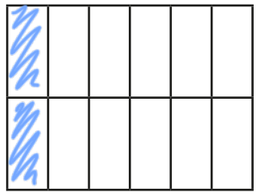
$\frac{3}{4} = \frac{9}{12}$



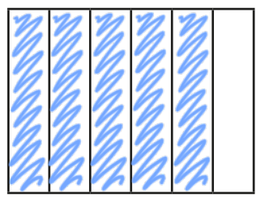
c)



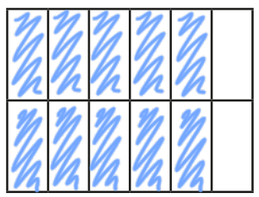
$\frac{1}{6} = \frac{2}{12}$



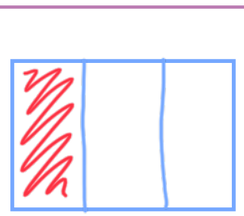
d)



$\frac{5}{6} = \frac{10}{12}$

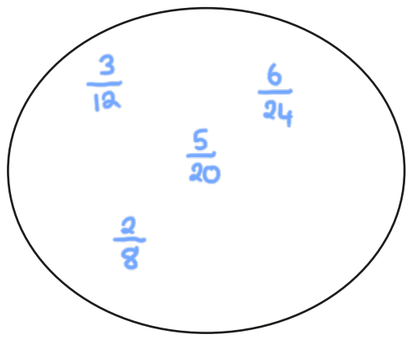


2 Draw two rectangles to show that $\frac{1}{3} = \frac{4}{12}$

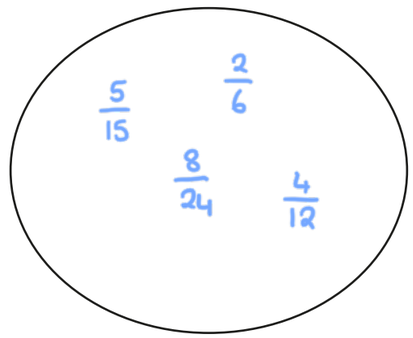


3 **a)** Sort the fractions into the groups.

Equivalent to $\frac{1}{4}$



Equivalent to $\frac{1}{3}$



$\frac{5}{15}$	$\frac{2}{6}$	$\frac{3}{12}$	$\frac{6}{24}$	$\frac{8}{24}$	$\frac{5}{20}$	$\frac{4}{12}$	$\frac{2}{8}$

b) Write one more fraction in each group.

4 Complete the equivalent fractions.

a) $\frac{1}{7} = \frac{2}{14}$

b) $\frac{5}{7} = \frac{10}{14}$

c) $\frac{7}{8} = \frac{14}{16}$

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

e) $\frac{3}{4} = \frac{12}{16}$

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

g) $\frac{2}{3} = \frac{10}{15}$

h) $\frac{2}{5} = \frac{10}{25}$

i) $\frac{2}{7} = \frac{10}{35}$

j) Describe the pattern in part g), h) and i) to a partner.

5 Find three ways to make the fractions equivalent.

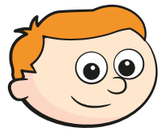
e.g.

a) $\frac{1}{2} = \frac{7}{14}$ $\quad \frac{1}{8} = \frac{7}{56}$ $\quad \frac{1}{100} = \frac{7}{700}$

b) $\frac{7}{7} = \frac{14}{14}$ $\quad \frac{7}{1} = \frac{14}{2}$ $\quad \frac{7}{10} = \frac{14}{20}$

c) $\frac{1}{7} = \frac{2}{14}$ $\quad \frac{5}{7} = \frac{10}{14}$ $\quad \frac{21}{7} = \frac{42}{14}$

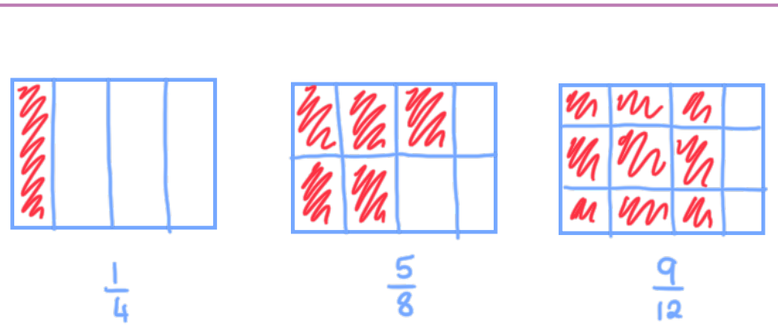
6 Ron is finding equivalent fractions to $\frac{1}{4}$



$\frac{1}{4}$ is equivalent to $\frac{5}{8}$ and $\frac{9}{12}$

Do you agree with Ron? No

Draw a diagram to support your answer.



Compare answers with a partner.

7 Here are some equivalent fractions.

Find the values of A, B and C.

$\frac{A}{9}$ $\quad \frac{3}{B}$ $\quad \frac{2}{18}$ $\quad \frac{C}{90}$

A = 1 $\quad$ B = 27 $\quad$ C = 10

8 Here are three fraction cards.

All the fractions are equivalent.

$\frac{3}{A}$ $\quad \frac{B}{14}$ $\quad \frac{12}{C}$

A + B = 13

Work out the value of C.

C = 28

9 $\frac{1}{5} = \frac{3}{1 + \bullet}$

Find the value of $\bullet$

$\bullet$ = 14