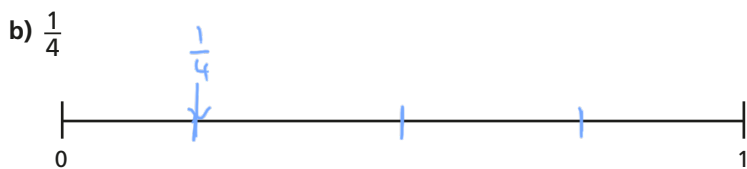
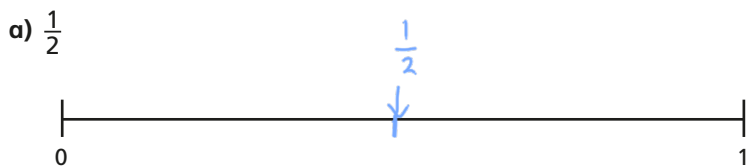


Fractions on a number line

1 Draw an arrow to show the fractions on the number lines.



Are your answers accurate or are they estimates?

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

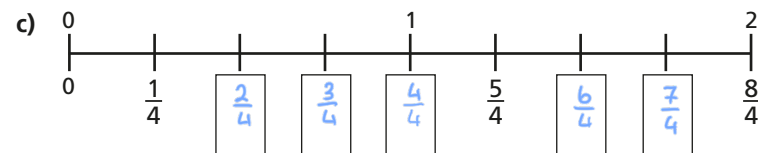
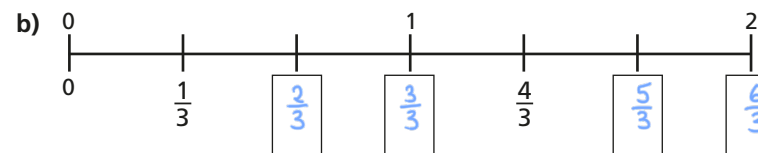
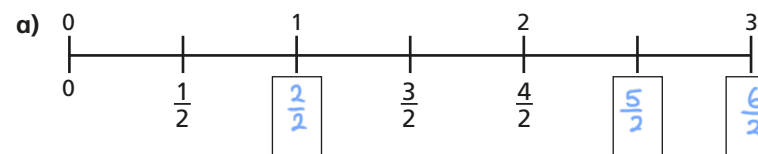
a) $\frac{1}{2} > \frac{1}{4}$

b) $\frac{1}{4} < \frac{1}{3}$

c) $\frac{1}{3} < \frac{1}{2}$



3 Write the missing fractions on the number lines.



d) Write three fractions that are equivalent to one whole.

Use the number lines to help you.

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

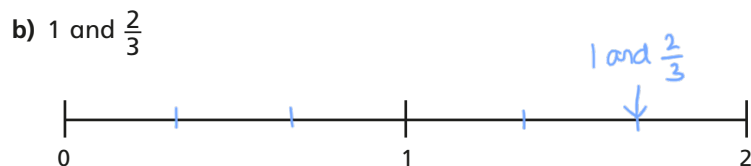
What do you notice?

The numerator is equal to the denominator.

Talk about it with a partner.



- 4 Draw an arrow to estimate where each fraction belongs on the number line.



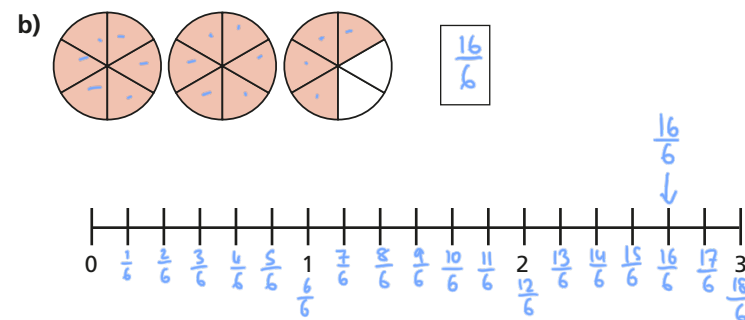
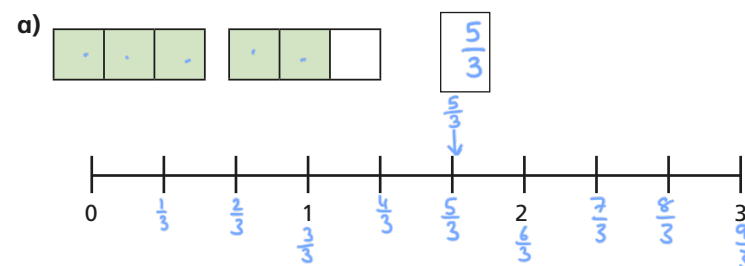
- 5 Write each fraction under the correct heading.

$\frac{2}{3}$	$\frac{4}{4}$	$\frac{5}{3}$	$\frac{1}{8}$	$\frac{3}{3}$
$\frac{3}{4}$	$\frac{7}{4}$	$\frac{8}{8}$	$\frac{7}{8}$	

Less than one whole	Equal to one whole	More than one whole
$\frac{2}{3}$ $\frac{3}{4}$ $\frac{1}{8}$	$\frac{4}{4}$ $\frac{8}{8}$ $\frac{3}{3}$	$\frac{7}{4}$ $\frac{5}{3}$
$\frac{3}{4}$		



- 6 What fraction is shown in each diagram?
Draw an arrow to show the fraction on the number line.



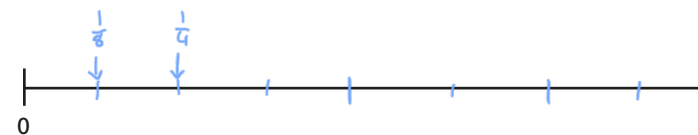
- 7



One eighth is greater than one quarter.

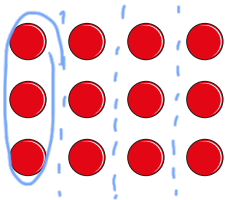
Do you agree with Teddy? NO

Use the number line to show why.



Fractions of a set of objects (1)

1 Here are some counters.



a) Circle $\frac{1}{4}$ of the counters.

b) How many counters did you circle?

c) What is $\frac{1}{4}$ of 12?

2 Draw counters in the bar models to help you complete each number sentence. The first one has been done for you.

a) $\frac{1}{2}$ of 8 =

b) $\frac{1}{2}$ of 16 =

c) $\frac{1}{4}$ of 8 =

d) $\frac{1}{4}$ of 16 =



3



To find a half I need to divide by 2

Do you agree with Dexter? yes

Talk about it with a partner.

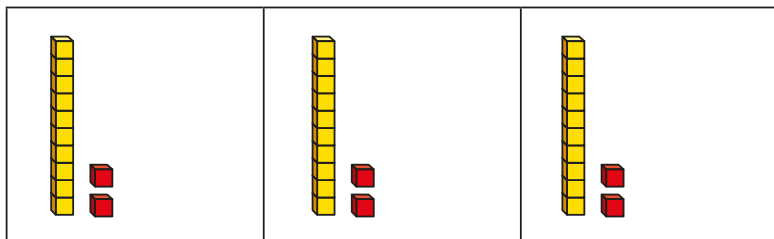
4

Complete the table.

Fraction	Division	Example	Drawing
one half	divide by 2	$\frac{1}{2}$ of 6 = 3	
one quarter	divide by 4	$\frac{1}{4}$ of 8 = 2	
one third	divide by 3	$\frac{1}{3}$ of 15 = 5	
one fifth	divide by 5	$\frac{1}{5}$ of 15 = 3	



- 5 Huan uses a bar model and base 10 to find $\frac{1}{3}$ of 36



Use Huan's method to complete the calculations.

a) $\frac{1}{3}$ of 63 = c) $\frac{1}{4}$ of 92 =

b) $\frac{1}{4}$ of 48 =

- 6 Nijah uses a bar model and place value counters to find $\frac{1}{3}$ of 36



Use Nijah's method to complete the calculations.

a) $\frac{1}{3}$ of 96 = c) $\frac{1}{4}$ of 52 =

b) $\frac{1}{5}$ of 60 =

- 7 Which amount is greater? Tick your answer.

$\frac{1}{3}$ of £75 or $\frac{1}{5}$ of £75

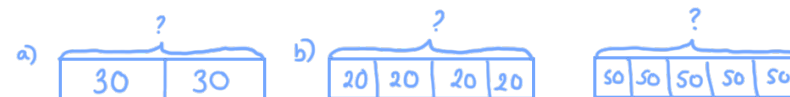
$\frac{1}{3}$ of £75 = £25
 $\frac{1}{5}$ of £75 = £15

Show your workings.

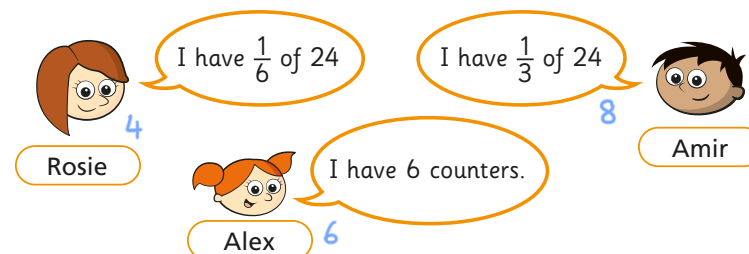
- 8 Complete the number sentences.

a) $\frac{1}{2}$ of = 30 c) $\frac{1}{5}$ of = 50

b) $\frac{1}{4}$ of = 20



- 9 Rosie, Amir and Alex each find a fraction of 24 using counters.



- a) Order the children from least counters to most counters.

Rosie Alex Amir

least counters most counters

- b) What fraction of the counters does Alex have? $\frac{6}{24} = \frac{1}{4}$
- c) Rosie and Amir put their counters together.

Write their total number of counters as a fraction of 24

$4 + 8 = 12$

Fractions of a set of objects (2)

- 1 Draw counters in the bar models to help you complete each number sentence.

a) $\frac{2}{3}$ of 15 = 

b) $\frac{3}{4}$ of 8 = 

c) $\frac{2}{5}$ of 20 = 

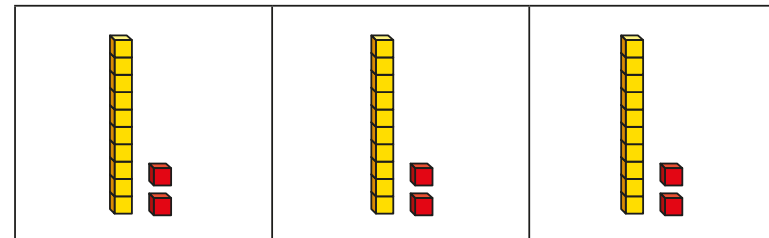
- 2 Match the questions and answers.

$\frac{2}{3}$ of 9 = ?		<input type="text" value="9"/>
$\frac{3}{5}$ of 15 = ?		<input type="text" value="6"/>
$\frac{5}{6}$ of 12 = ?		<input type="text" value="15"/>
$\frac{3}{4}$ of 20 = ?		<input type="text" value="10"/>

- 3 What is $\frac{6}{6}$ of 18?
How do you know?



- 4 Brett uses a bar model and base 10 to find $\frac{2}{3}$ of 36



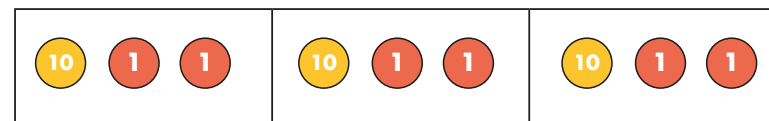
Use Brett's method to complete the number sentences.

a) $\frac{2}{3}$ of 63 =

b) $\frac{3}{4}$ of 48 =

c) $\frac{3}{4}$ of 92 =

- 5 Kim uses a bar model and place value counters to find $\frac{2}{3}$ of 36



Use Kim's method to complete the number sentences.

a) $\frac{2}{3}$ of 96 =

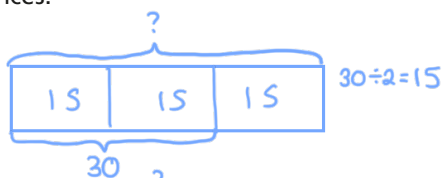
b) $\frac{3}{5}$ of 60 =

c) $\frac{3}{4}$ of 52 =

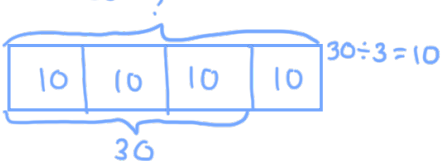


6 Complete the number sentences.

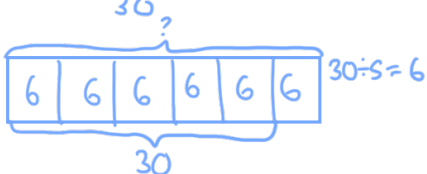
a) $\frac{2}{3}$ of $\boxed{45} = 30$



b) $\frac{3}{4}$ of $\boxed{40} = 30$



c) $\frac{5}{6}$ of $\boxed{36} = 30$



7



Tommy

To find $\frac{3}{4}$ of 12,
you divide by 4 and then
multiply the answer by 3

To find $\frac{3}{4}$ of 12,
you divide by 3 and then
multiply the answer by 4



Dexter

Who is correct? Tommy

How do you know? Show your working.

8 Dora, Whitney and Ron each find a fraction of 24 using counters.



Dora

I have $\frac{5}{6}$ of 24

I have $\frac{2}{3}$ of 24



Whitney



Ron

I have 18 counters.

a) Who has the most counters? Show your workings.

$\frac{5}{6}$ of 24 = 20 $\frac{2}{3}$ of 24 = 16

Dora

b) How many more counters does Dora have than Whitney?

$20 - 16 = 4$

$\boxed{4}$

9 Write fractions to make the statements correct.

e.g.
 $\frac{1}{6}$ of 36 < 18

$\frac{1}{2}$ of 36 = 18

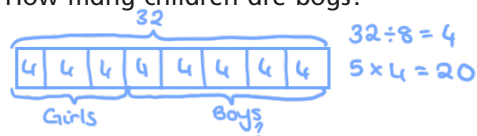
$\frac{3}{4}$ of 36 > 18

How many different answers can you find for each?
Compare with a partner.

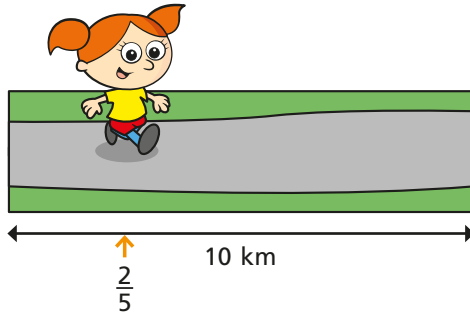
Fractions of a set of objects (3)

1 In a class of 32 children, three eighths are girls.
How many children are boys?

20



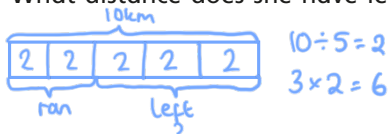
2 Alex is taking part in a 10 km race.



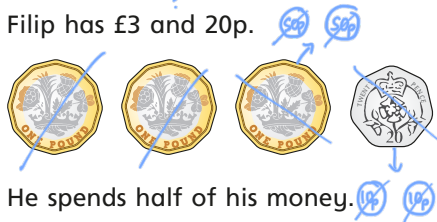
She has run two fifths of the race.

What distance does she have left to run?

6 km



3 Filip has £3 and 20p.



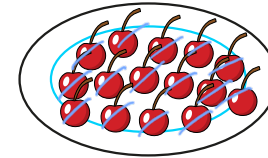
He spends half of his money.

How much does he have left?

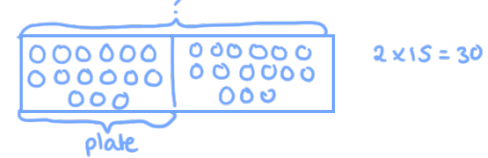


£ 1 and 60 p

4 Teddy opens a bag of cherries and puts $\frac{1}{2}$ on a plate.



How many cherries were there in the whole bag?



30

5 Ron has £4 and 50p.

He decides to share the money equally between himself and his two sisters.



How much money will each child get?



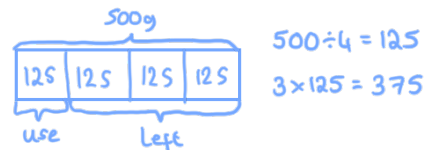
£ 1 and 50 p

6 A bag of potatoes weighs 500 g.

Annie's dad uses one quarter of the potatoes to make a shepherd's pie.



What is the mass of the potatoes left in the bag?



375 g

7 Dexter spends one third of his money.

He has these coins left.

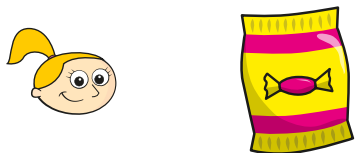


How much did Dexter spend?



£ and p

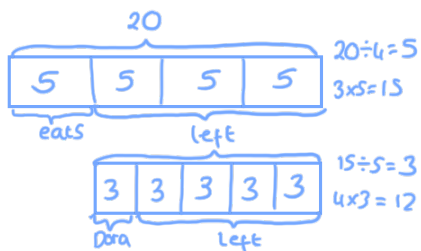
8 Eva has a bag of 20 sweets.



She eats $\frac{1}{4}$ of the sweets.

She gives $\frac{1}{5}$ of the sweets that are left to Dora and 2 sweets to her mum.

How many sweets does Eva have left? $12 - 2 = 10$

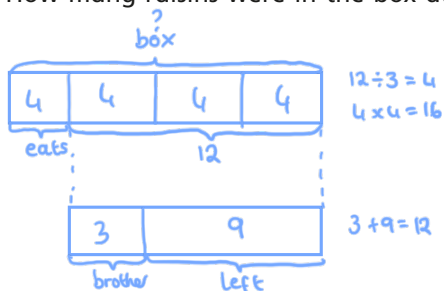


9 Whitney has a box of raisins.

She eats $\frac{1}{4}$ of the raisins and gives 3 to her brother.

She has 9 raisins left.

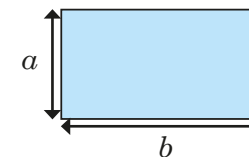
How many raisins were in the box at the start?



10 Here is a rectangle.

The perimeter of the rectangle is less than 30 cm.

Side a is one half of the length of side b .



a) Complete the table to show the different possible lengths of side a and side b .

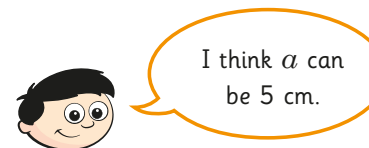
Length of side a	Length of side b	Perimeter
1 cm	2 cm	6 cm
2 cm	4 cm	12 cm
3 cm	6 cm	18 cm
4 cm	8 cm	24 cm

b) What are the longest possible lengths of side a and b ?

side a 4 cm

side b 8 cm

c)



Talk to a partner about why Dexter is wrong.

Equivalent fractions (1)

1 Shade the bar models to represent the fractions.

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

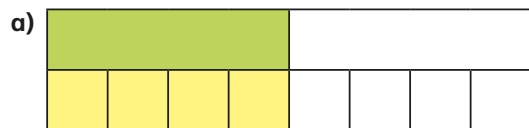


b) Shade $\frac{2}{4}$ of the bar model.

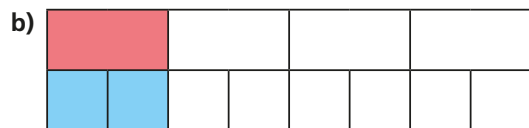


What do you notice?

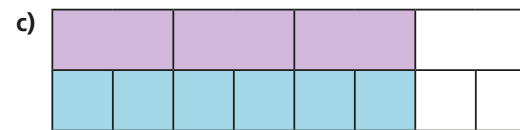
2 Complete the equivalent fractions.



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



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

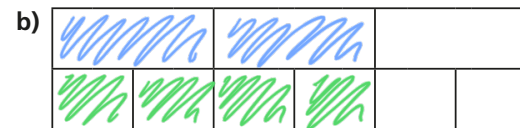


$$\frac{3}{4} = \frac{6}{\boxed{8}}$$

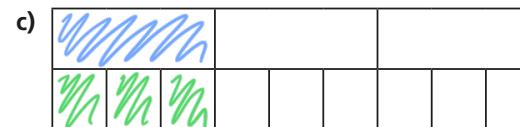
3 Shade the bar models to represent the equivalent fractions.



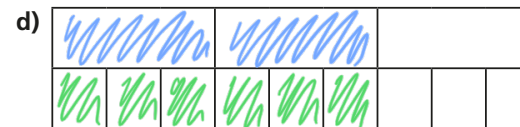
$$\frac{1}{3} = \frac{2}{6}$$



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



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

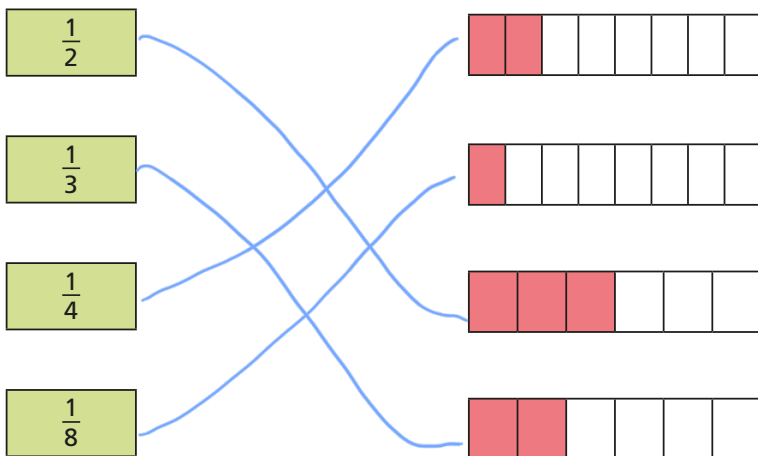


$$\frac{2}{3} = \frac{6}{9}$$

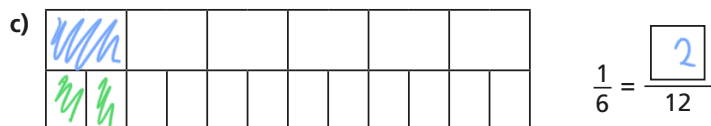
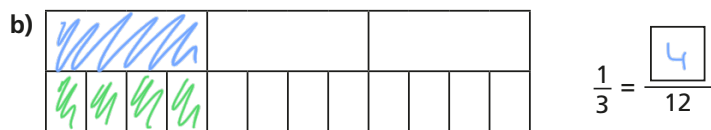
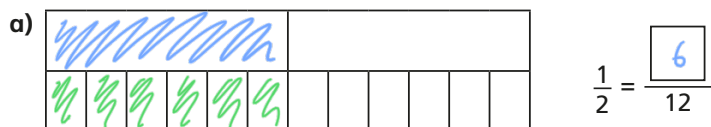
Can you find any more equivalent fractions using the bar models?



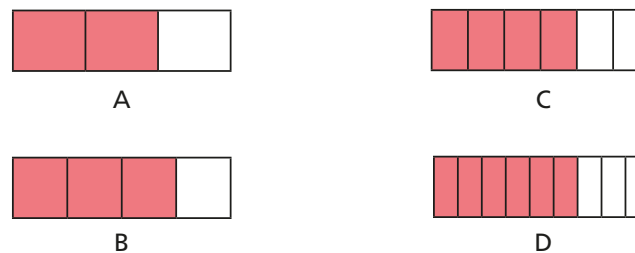
4 Match each bar model to its equivalent fraction.



5 Shade the bar models to complete the equivalent fractions.



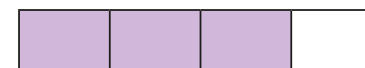
6 The bar models represent fractions.



Which is the odd one out? B

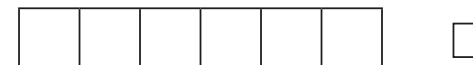
Why do you think this?

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.