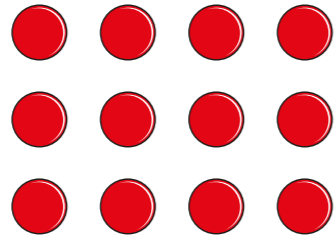


# Fractions of a set of objects (1)

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 =

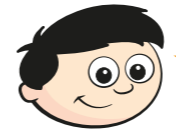
b)  $\frac{1}{2}$  of 16 =

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? \_\_\_\_\_

Talk about it with a partner.

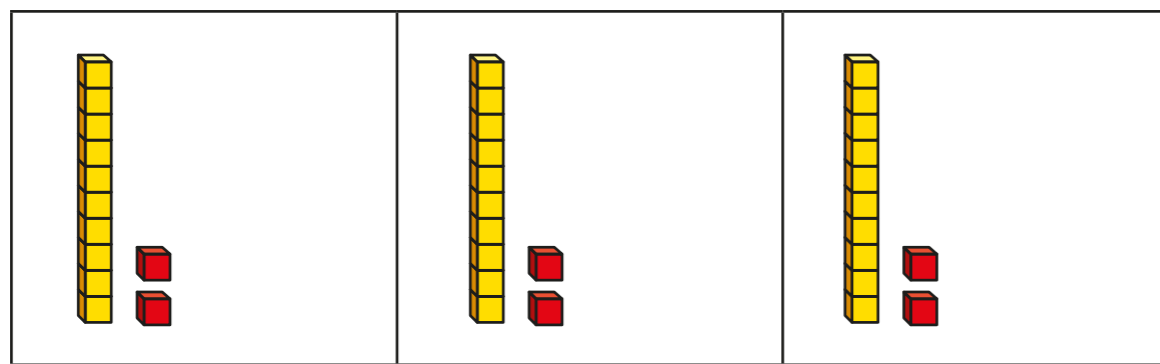
4

Complete the table.

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



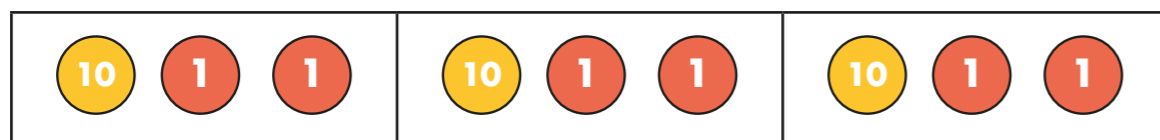
- 5 Huan uses a bar model and base 10 to find  $\frac{1}{3}$  of 36



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

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.

\_\_\_\_\_      \_\_\_\_\_      \_\_\_\_\_  
              
 least counters      most counters

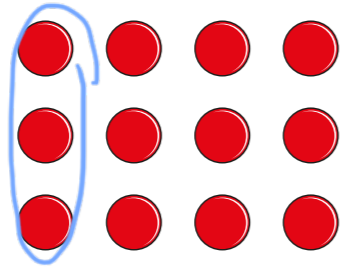
- b) What fraction of the counters does Alex have?

- c) Rosie and Amir put their counters together.

Write their total number of counters as a fraction of 24

# 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.

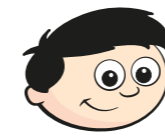
a)  $\frac{1}{2}$  of 8 =

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

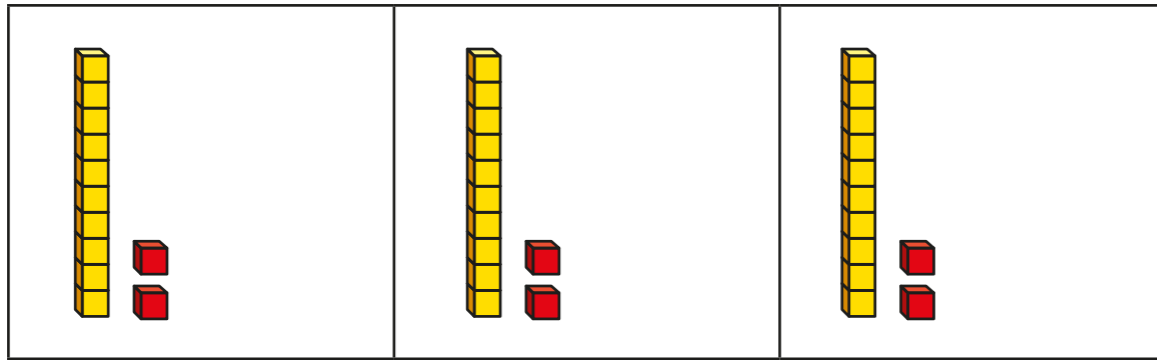
Talk about it with a partner.

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	

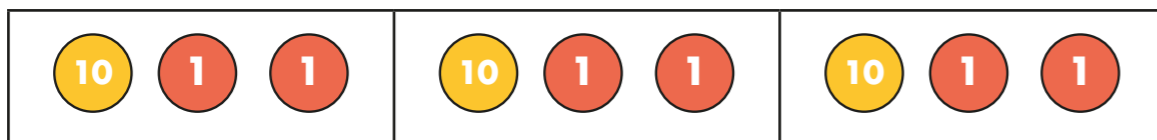
- 5 Huan uses a bar model and base 10 to find  $\frac{1}{3}$  of 36



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

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?

- c) Rosie and Amir put their counters together.

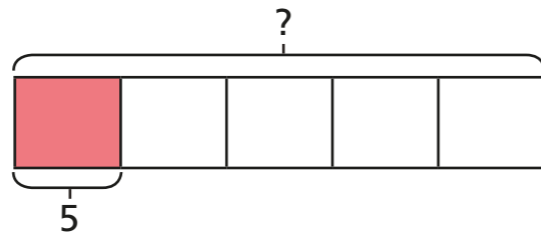
Write their total number of counters as a fraction of 24

# Calculate quantities

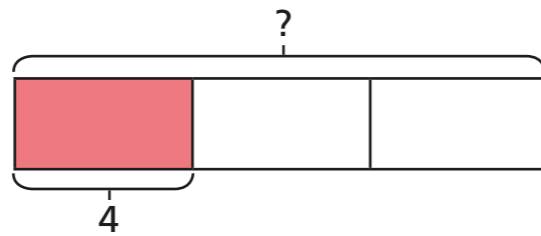
1 Match the calculations to the bar models.

Work out the missing quantities.

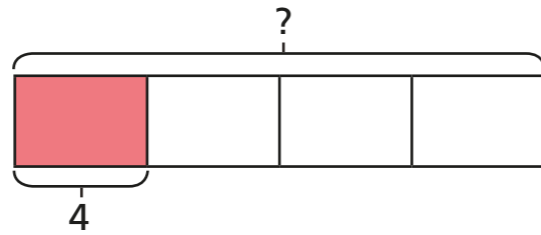
$$\frac{1}{4} \text{ of } \square = 5$$



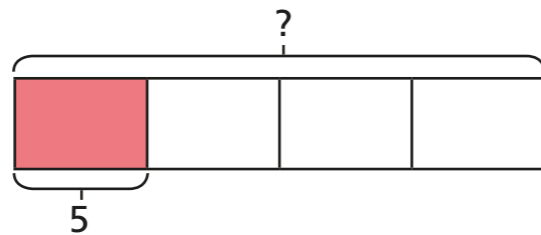
$$\frac{1}{4} \text{ of } \square = 4$$



$$\frac{1}{5} \text{ of } \square = 5$$



$$\frac{1}{3} \text{ of } \square = 4$$



2 Complete the sentences.

a) When one fifth is 1, the whole is

When one fifth is 10, the whole is

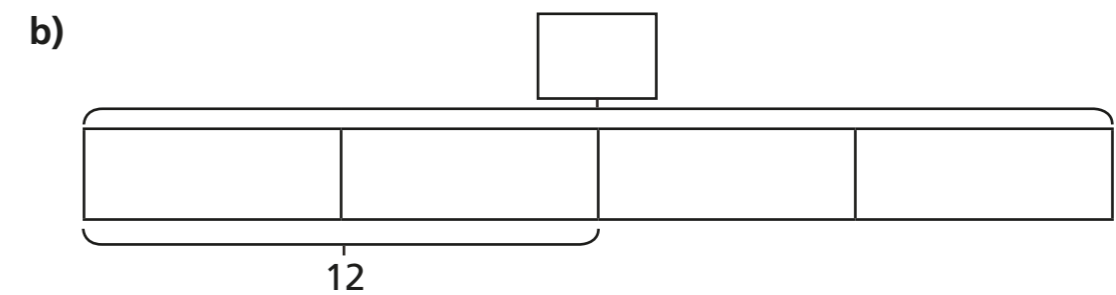
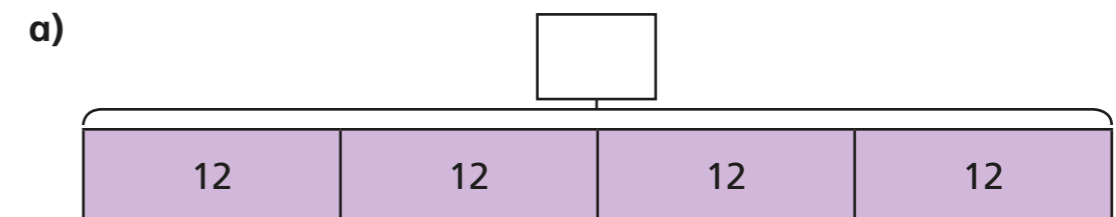
When one fifth is 20, the whole is

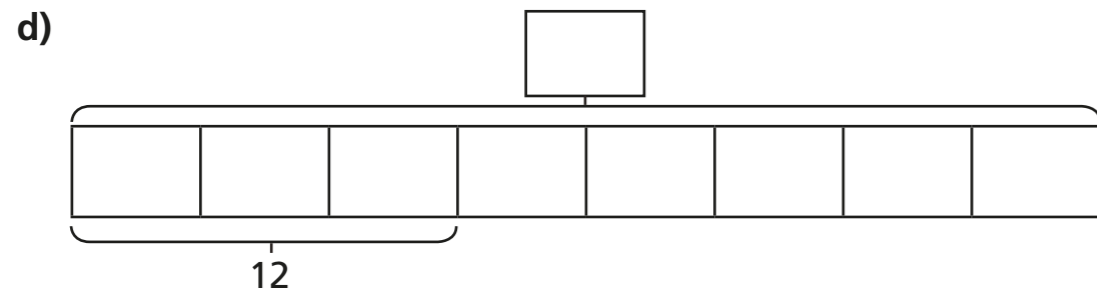
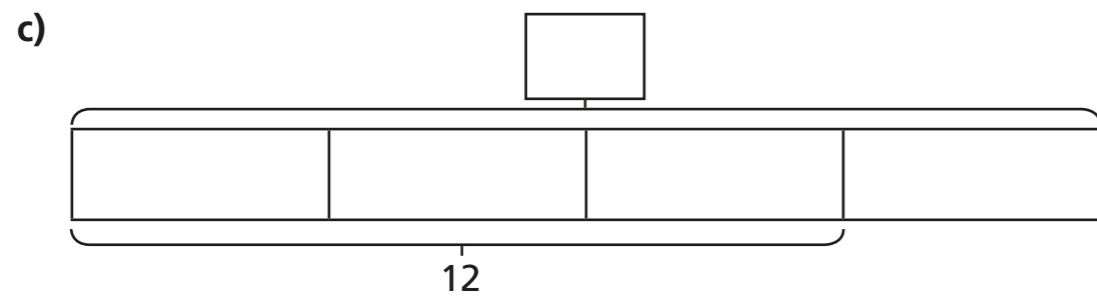
b) When  $\frac{1}{7}$  is 2, the whole is

When  $\frac{1}{7}$  is 4, the whole is

When  $\frac{1}{7}$  is 8, the whole is

3 Complete the bar models and fill in the whole.





4 Complete the calculations.

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

e)  $\frac{3}{7}$  of  = 15

b)  $\frac{1}{2}$  of  = 15

f)  $\frac{5}{7}$  of  = 15

c)  $\frac{1}{4}$  of  = 15

g)  $\frac{5}{7}$  of  = 35

d)  $\frac{3}{4}$  of  = 15

h)  $\frac{7}{5}$  of  = 35

5 Dora and Mo have a full bottle of juice.

Dora drinks  $\frac{2}{5}$  of the juice.

Mo drinks  $\frac{1}{5}$  of the juice.

There is 150 ml of juice left in the bottle.

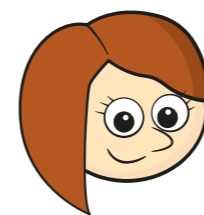
How much juice was in the full bottle?

ml

6 Rosie and Ron are collecting red and blue counters.

They have the same number of blue counters.

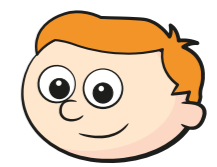
They have a different number of red counters.



Rosie

I have 18 counters altogether.  $\frac{2}{3}$  are blue.

$\frac{3}{4}$  of my counters are blue.



Ron

a) How many counters does Ron have altogether?

b) How many red counters do they each have?

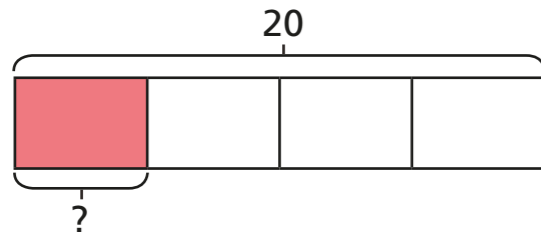
Rosie has  red counters.

Ron has  red counters.

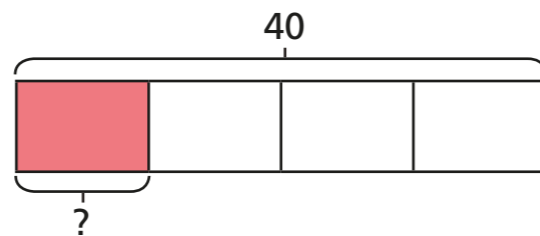
# Fractions of a quantity

1 Complete the number sentences.

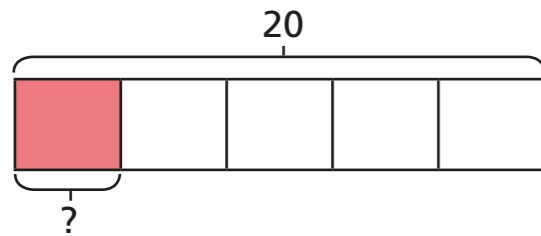
a)  $\frac{1}{4}$  of 20 =



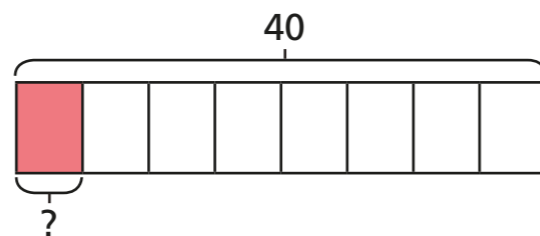
d)  $\frac{1}{4}$  of 40 =



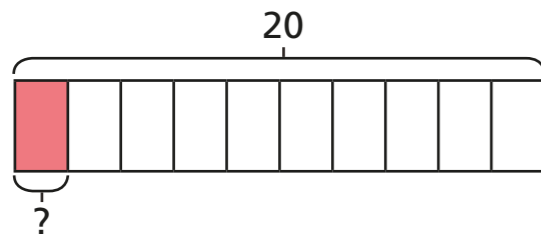
b)  $\frac{1}{5}$  of 20 =



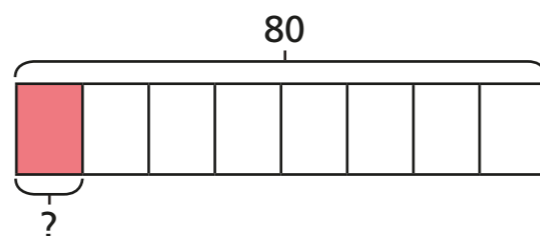
e)  $\frac{1}{8}$  of 40 =



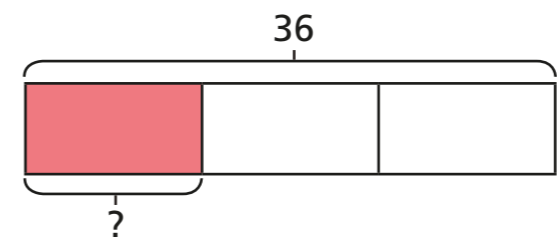
c)  $\frac{1}{10}$  of 20 =



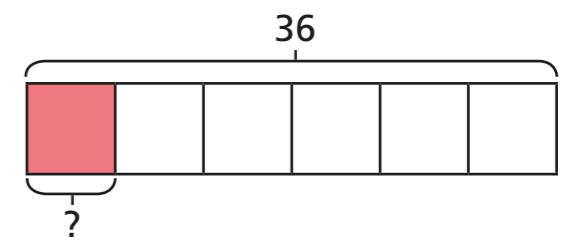
f)  $\frac{1}{8}$  of 80 =



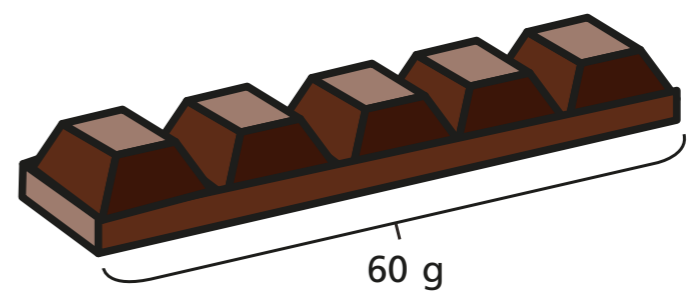
g)  $\frac{1}{3}$  of 36 =



h)  $\frac{1}{6}$  of 36 =



2 Filip has a chocolate bar with 5 equal pieces. The chocolate bar weighs 60 g.



a) What is the mass of one piece?

The mass of one piece is  g.

b) Filip eats  $\frac{3}{5}$  of the bar of chocolate.

How many grams does Filip eat?

Filip eats  g of chocolate.

3 Complete the number sentences.

a)  $\frac{1}{4}$  of 24 =

c)  $\frac{1}{8}$  of 32 =

$\frac{3}{4}$  of 24 =

$\frac{5}{8}$  of 32 =

b)  $\frac{1}{7}$  of 35 =

d)  $\frac{5}{8}$  of 64 =

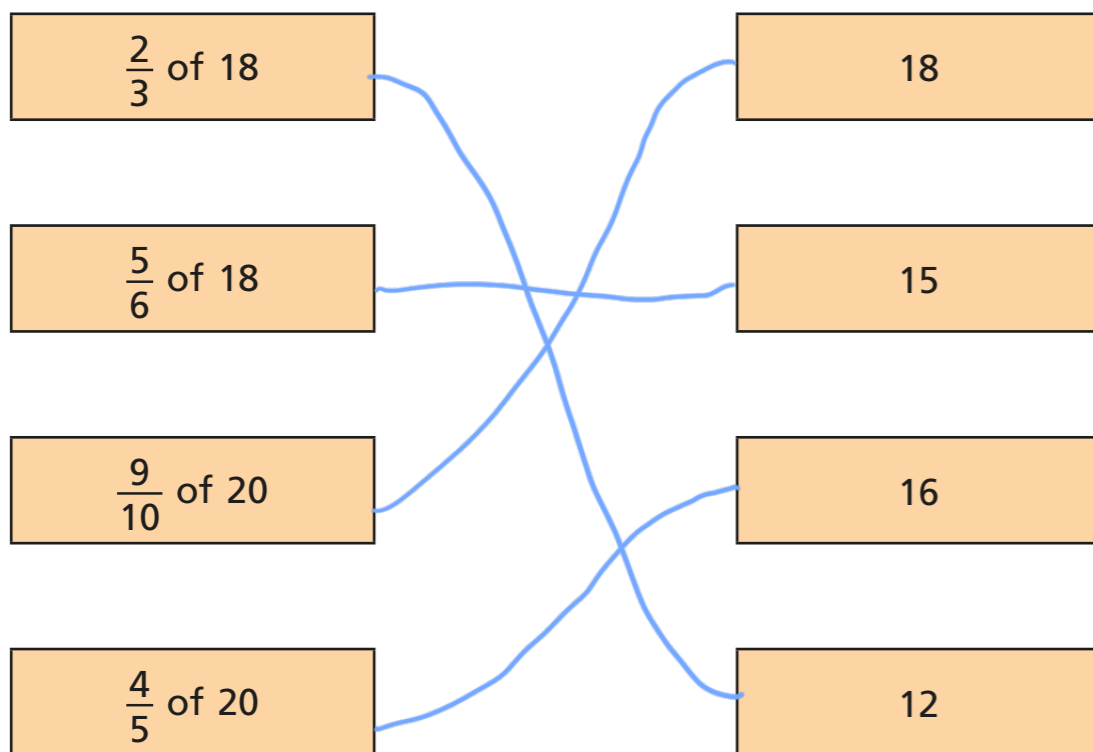
$\frac{3}{7}$  of 35 =

$\frac{7}{8}$  of 64 =

$\frac{5}{7}$  of 35 =

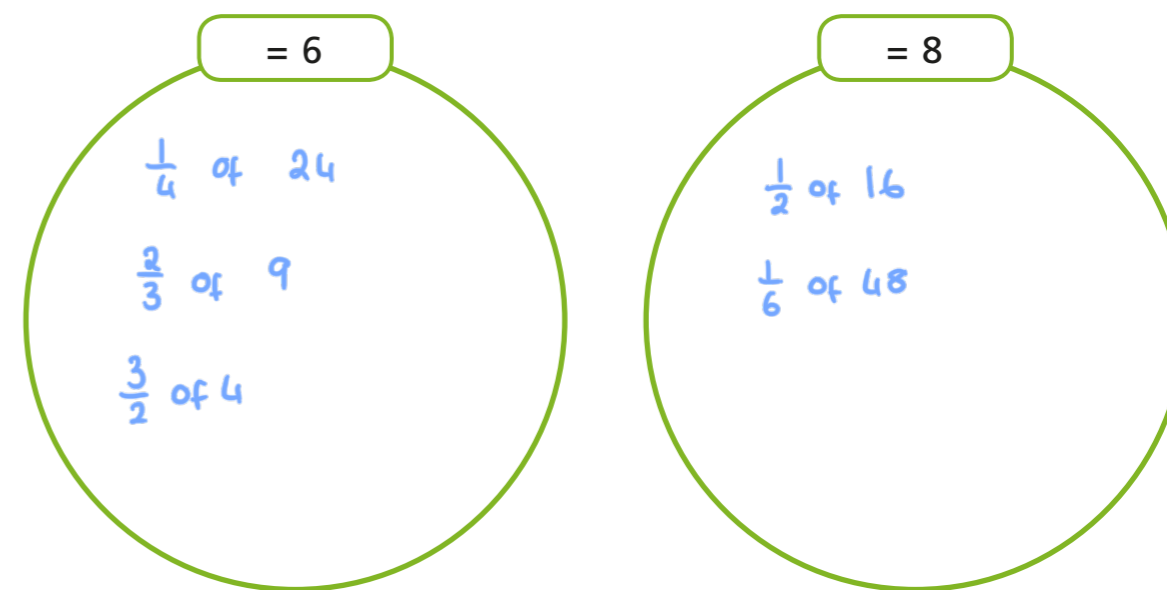
$\frac{10}{8}$  of 64 =

4 Match the calculations to the answers.



5 a) Write each calculation in the correct circle.

$\frac{1}{2}$  of 16     $\frac{1}{4}$  of 24     $\frac{2}{3}$  of 9     $\frac{3}{2}$  of 4     $\frac{1}{6}$  of 48



b) Write one more calculation in each circle.

6 Write <, > or = to compare the calculations.

a)  $\frac{2}{7}$  of 21   $\frac{2}{3}$  of 21

b)  $\frac{3}{5}$  of 40   $\frac{2}{3}$  of 36

c)  $\frac{6}{8}$  of 40   $\frac{3}{4}$  of 40

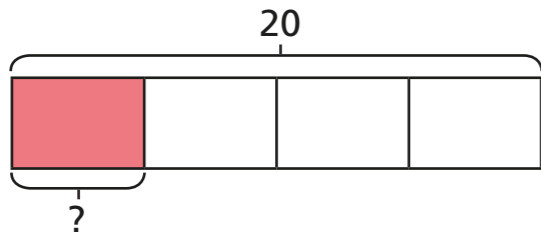
d)  $\frac{6}{10}$  of 50   $\frac{3}{10}$  of 100



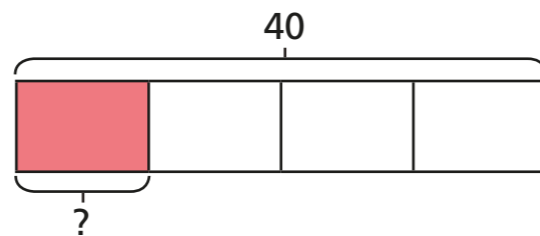
# Fractions of a quantity

1 Complete the number sentences.

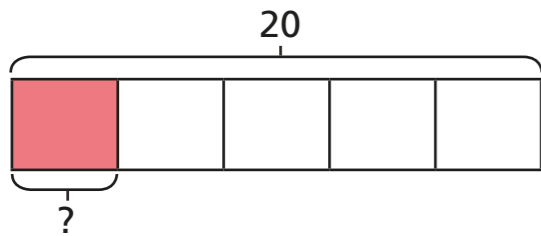
a)  $\frac{1}{4}$  of 20 =



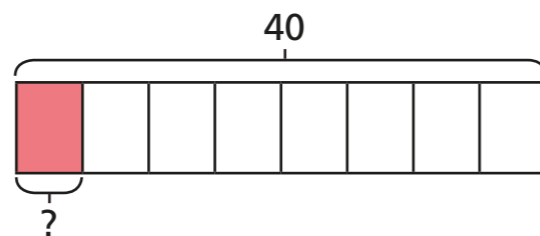
d)  $\frac{1}{4}$  of 40 =



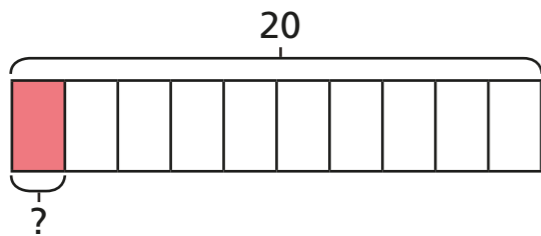
b)  $\frac{1}{5}$  of 20 =



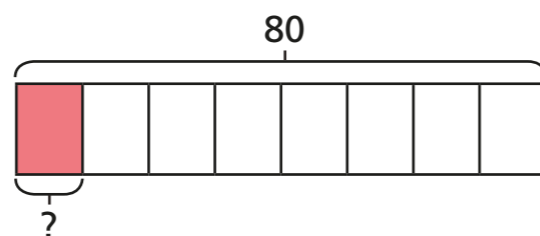
e)  $\frac{1}{8}$  of 40 =



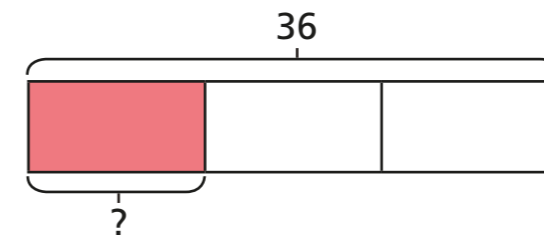
c)  $\frac{1}{10}$  of 20 =



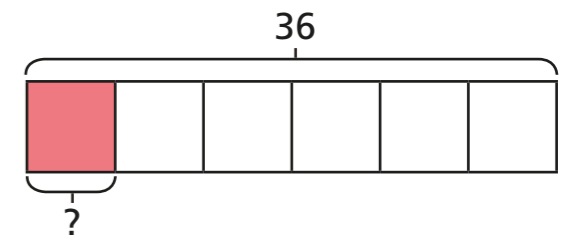
f)  $\frac{1}{8}$  of 80 =



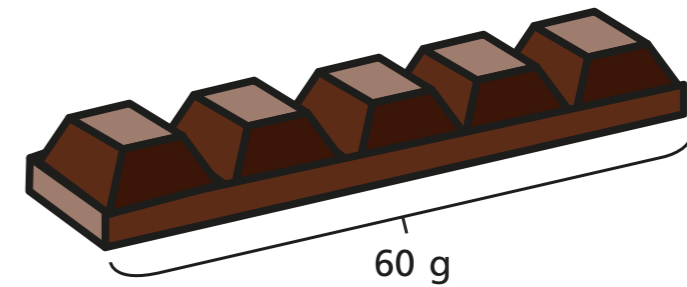
g)  $\frac{1}{3}$  of 36 =



h)  $\frac{1}{6}$  of 36 =



2 Filip has a chocolate bar with 5 equal pieces. The chocolate bar weighs 60 g.



a) What is the mass of one piece?

The mass of one piece is  g.

b) Filip eats  $\frac{3}{5}$  of the bar of chocolate.

How many grams does Filip eat?

Filip eats  g of chocolate.

3 Complete the number sentences.

a)  $\frac{1}{4}$  of 24 =

c)  $\frac{1}{8}$  of 32 =

$\frac{3}{4}$  of 24 =

$\frac{5}{8}$  of 32 =

b)  $\frac{1}{7}$  of 35 =

d)  $\frac{5}{8}$  of 64 =

$\frac{3}{7}$  of 35 =

$\frac{7}{8}$  of 64 =

$\frac{5}{7}$  of 35 =

$\frac{10}{8}$  of 64 =

4 Match the calculations to the answers.

$\frac{2}{3}$  of 18

18

$\frac{5}{6}$  of 18

15

$\frac{9}{10}$  of 20

16

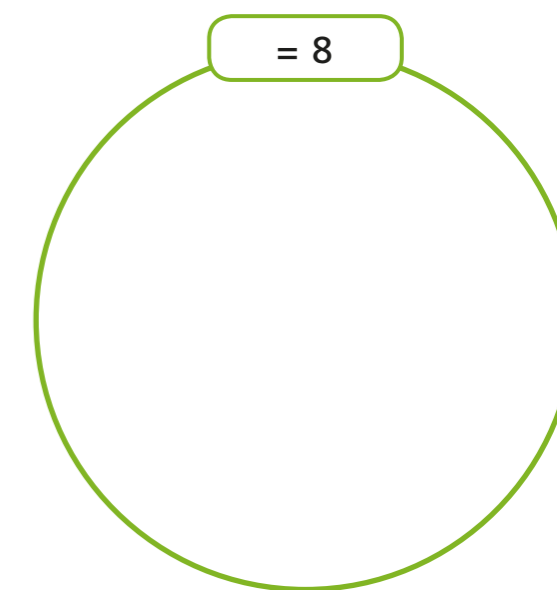
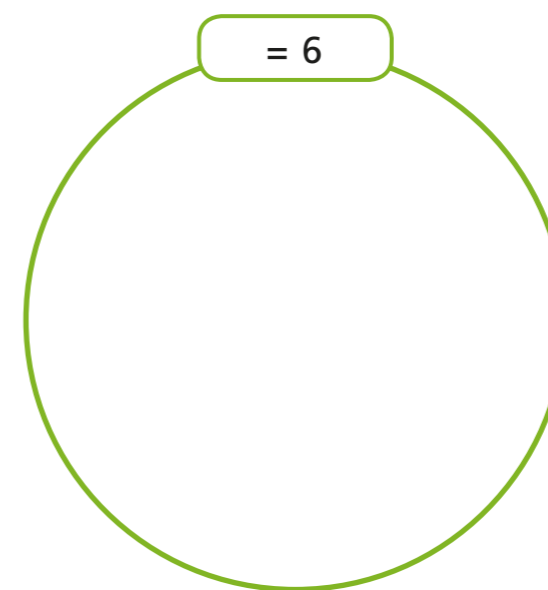
$\frac{4}{5}$  of 20

12



5 a) Write each calculation in the correct circle.

$\frac{1}{2}$  of 16     $\frac{1}{4}$  of 24     $\frac{2}{3}$  of 9     $\frac{3}{2}$  of 4     $\frac{1}{6}$  of 48



b) Write one more calculation in each circle.

6 Write <, > or = to compare the calculations.

a)  $\frac{2}{7}$  of 21   $\frac{2}{3}$  of 21

b)  $\frac{3}{5}$  of 40   $\frac{2}{3}$  of 36

c)  $\frac{6}{8}$  of 40   $\frac{3}{4}$  of 40

d)  $\frac{6}{10}$  of 50   $\frac{3}{10}$  of 100

# Calculate quantities

1 Match the calculations to the bar models.

Work out the missing quantities.

$\frac{1}{4}$  of  $\boxed{20} = 5$

$\frac{1}{4}$  of  $\boxed{16} = 4$

$\frac{1}{5}$  of  $\boxed{25} = 5$

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

2 Complete the sentences.

a) When one fifth is 1, the whole is  $\boxed{5}$

When one fifth is 10, the whole is  $\boxed{50}$

When one fifth is 20, the whole is  $\boxed{100}$

b) When  $\frac{1}{7}$  is 2, the whole is  $\boxed{14}$

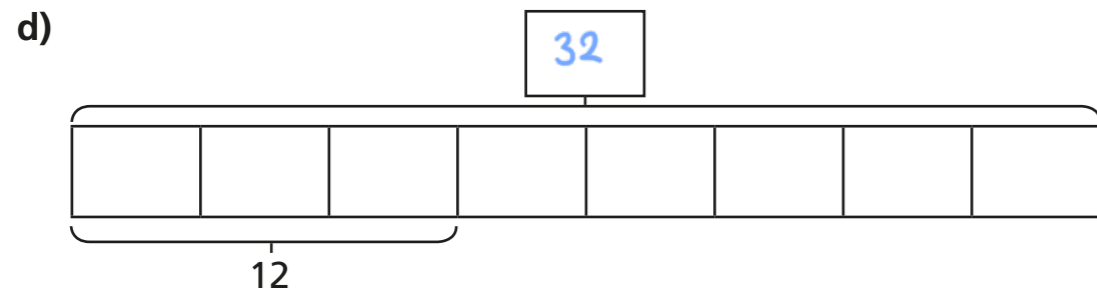
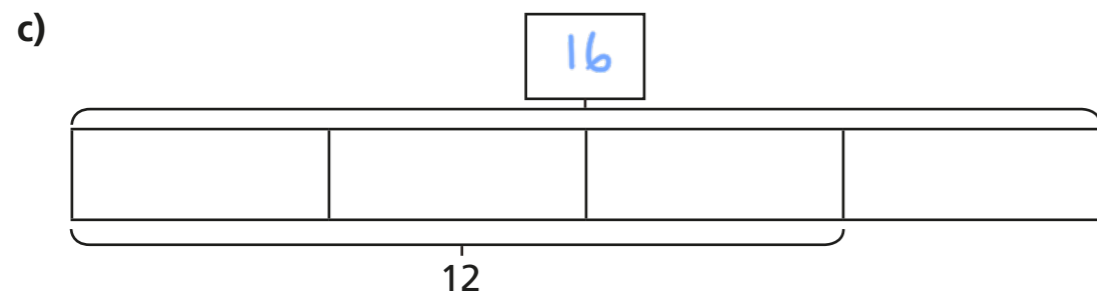
When  $\frac{1}{7}$  is 4, the whole is  $\boxed{28}$

When  $\frac{1}{7}$  is 8, the whole is  $\boxed{56}$

3 Complete the bar models and fill in the whole.

a)

b)



4 Complete the calculations.

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

e)  $\frac{3}{7}$  of  = 15

b)  $\frac{1}{2}$  of  = 15

f)  $\frac{5}{7}$  of  = 15

c)  $\frac{1}{4}$  of  = 15

g)  $\frac{5}{7}$  of  = 35

d)  $\frac{3}{4}$  of  = 15

h)  $\frac{7}{5}$  of  = 35

5 Dora and Mo have a full bottle of juice.

Dora drinks  $\frac{2}{5}$  of the juice.

Mo drinks  $\frac{1}{5}$  of the juice.

There is 150 ml of juice left in the bottle.

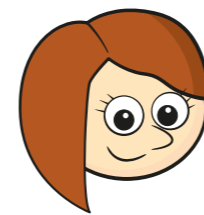
How much juice was in the full bottle?

ml

6 Rosie and Ron are collecting red and blue counters.

They have the same number of blue counters.

They have a different number of red counters.



Rosie

I have 18 counters altogether.  $\frac{2}{3}$  are blue.

$\frac{3}{4}$  of my counters are blue.



Ron

a) How many counters does Ron have altogether?

b) How many red counters do they each have?

Rosie has  red counters.

Ron has  red counters.