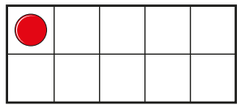
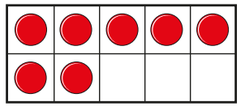
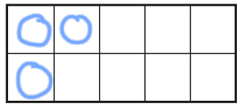
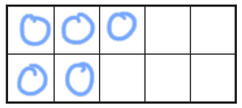
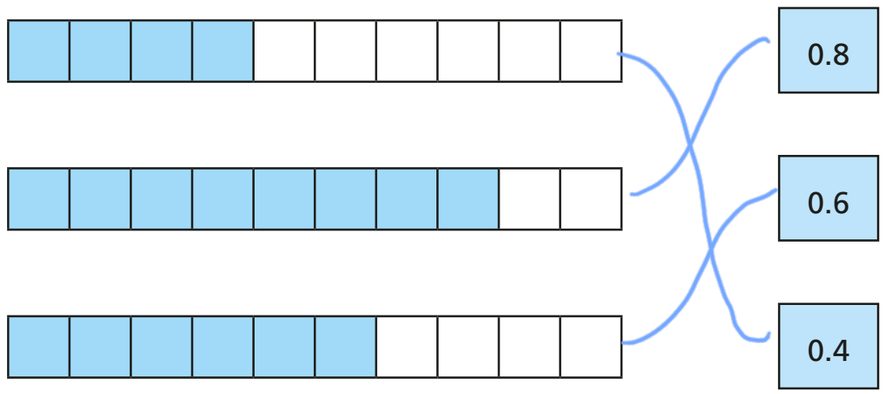
Tenths as decimals

1 Complete the table.

Representation	Words	Fraction	Decimal
	1 tenth	$\frac{1}{10}$	0.1
	7 tenths	$\frac{7}{10}$	0·7
	3 tenths	$\frac{3}{10}$	0.3
	5 tenths	$\frac{5}{10}$	0·5

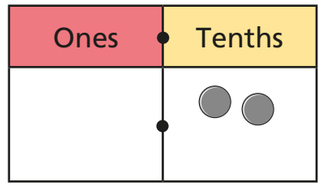
2 Match each bar model to the equivalent decimal.



3 Mo is using a place value chart to represent numbers.

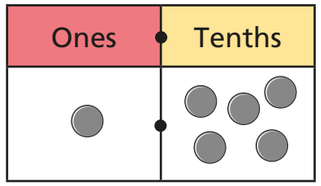
Write each number as a decimal.

a)



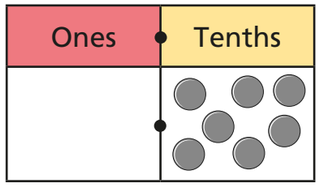
0·2

c)



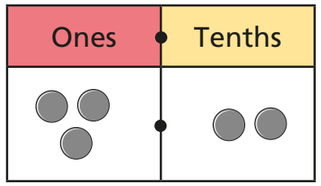
1·5

b)



0·7

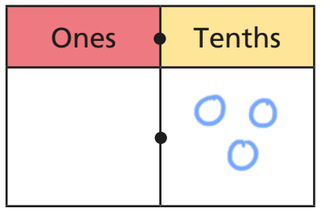
d)



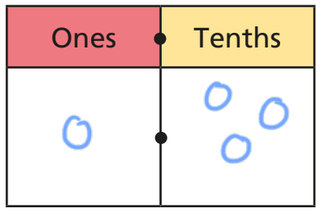
3·2

4 Draw counters to represent the numbers.

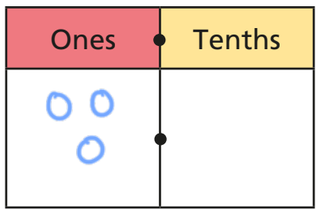
a) 0.3



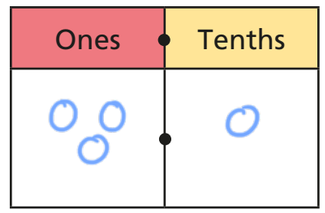
c) 1.3



b) 3



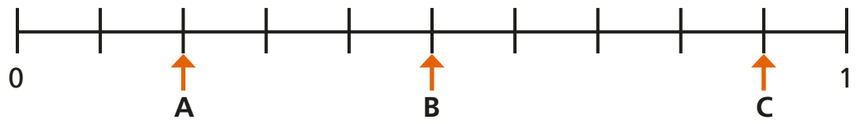
d) 3.1



5 Continue the pattern.

$\frac{1}{10}$	0.2	3 tenths	$\frac{4}{10}$	0.5
6 tenths	$\frac{7}{10}$	0·8	9 tenths	$\frac{10}{10}$

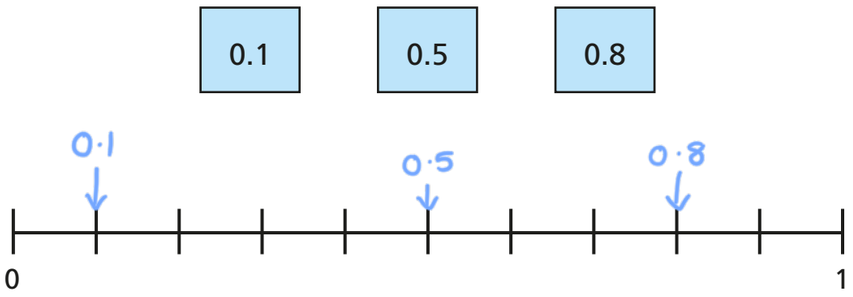
6 What decimal is each arrow pointing to?



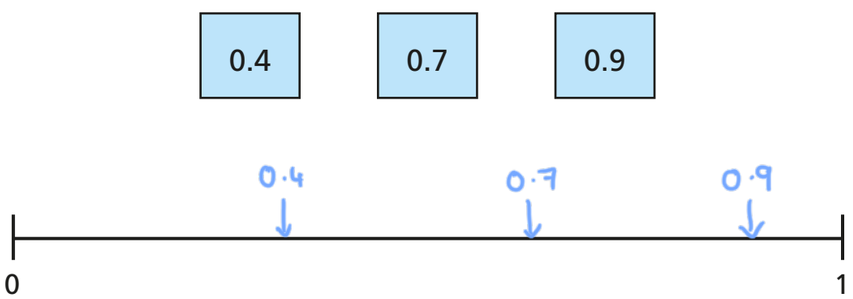
A = 0·2 B = 0·5 C = 0·9

7 Estimate the position of the decimals on the number lines.

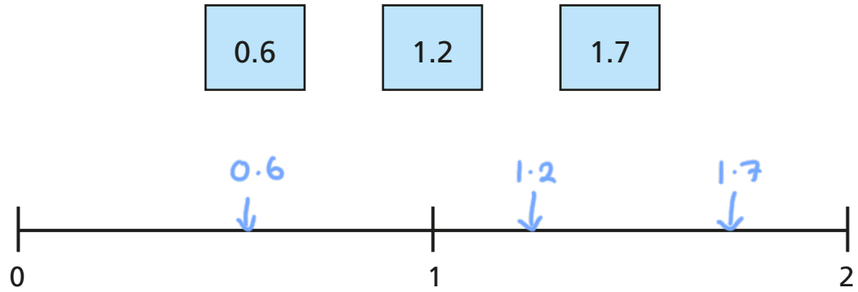
a)



b)



c)



8 Complete the statements.

a) 0.2 > $\frac{1}{10}$

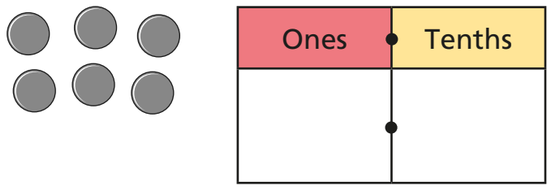
b) 0.8 < $\frac{9}{10}$

c) 7 tenths = 0.7

d) 1·2 = $\frac{12}{10}$

Is there more than one answer for each?

9 Aisha places 6 counters onto this place value chart.



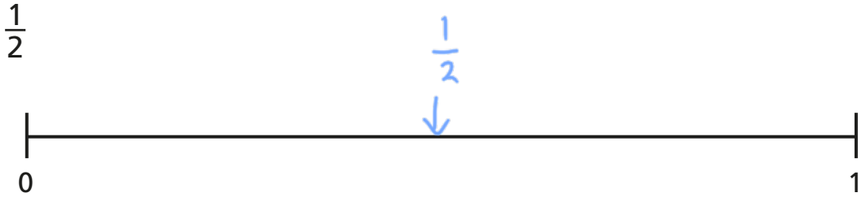
List all the possible numbers she could represent.

0·6 1·5 2·4 3·3 4·2 5·1 6

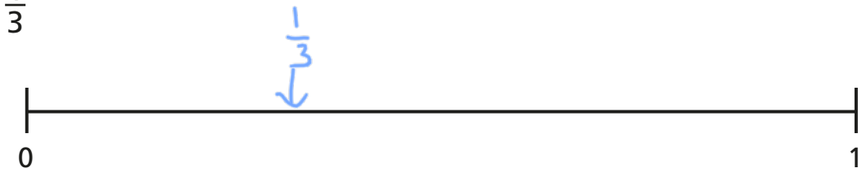
Fractions on a number line

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

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



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



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

Are your answers accurate or are they estimates?

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

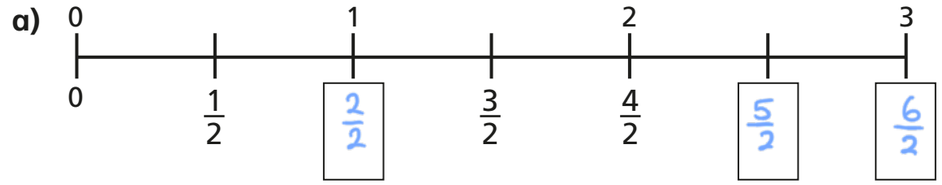
a) $\frac{1}{2}$ (>) $\frac{1}{4}$

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

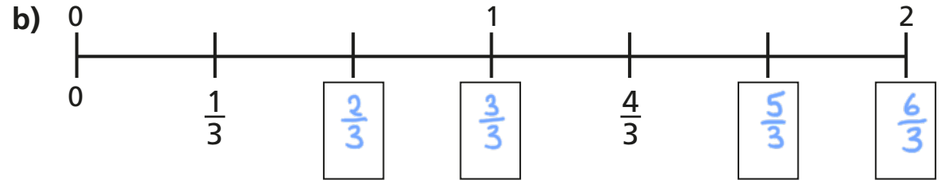
c) $\frac{1}{3}$ (<) $\frac{1}{2}$

3 Write the missing fractions on the number lines.

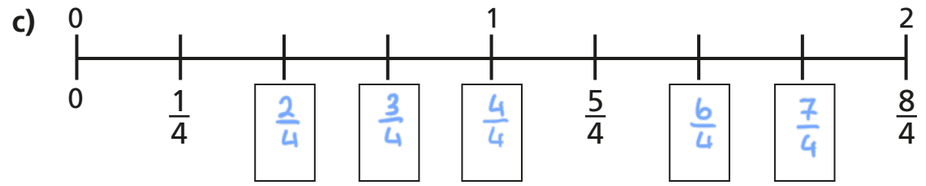
a)



b)



c)



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

Use the number lines to help you.

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

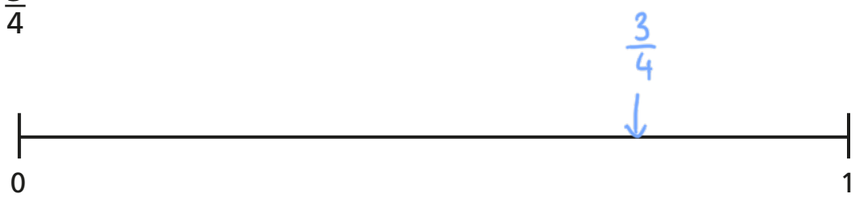
What do you notice?

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.

a) $\frac{3}{4}$



b) 1 and $\frac{2}{3}$

5 Write each fraction under the correct heading.

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

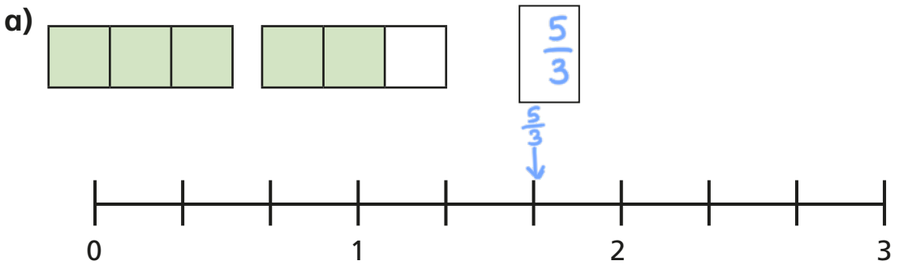
$\frac{3}{4}$ $\frac{7}{4}$ $\frac{8}{8}$ $\frac{7}{8}$

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

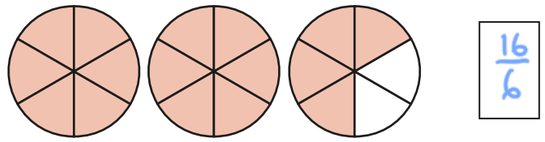
6 What fraction is shown in each diagram?

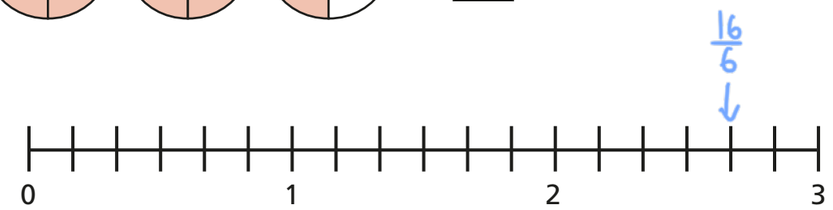
Draw an arrow to show the fraction on the number line.

a)

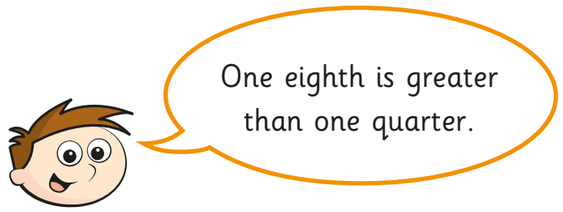


b)





7

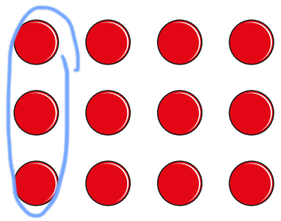


Do you agree with Teddy? NO

Use the number line to show why.

Fractions of a set of objects (1)

1 Here are some counters.



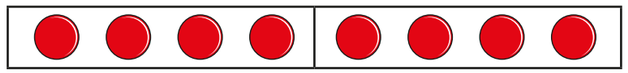
a) Circle $\frac{1}{4}$ of the counters.

b) How many counters did you circle? 3

c) What is $\frac{1}{4}$ of 12? 3

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 = 4



b) $\frac{1}{2}$ of 16 = 8

c) $\frac{1}{4}$ of 8 = 2

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

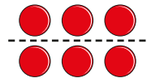
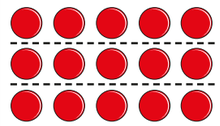
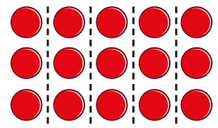
3

To find a half I need to divide by 2

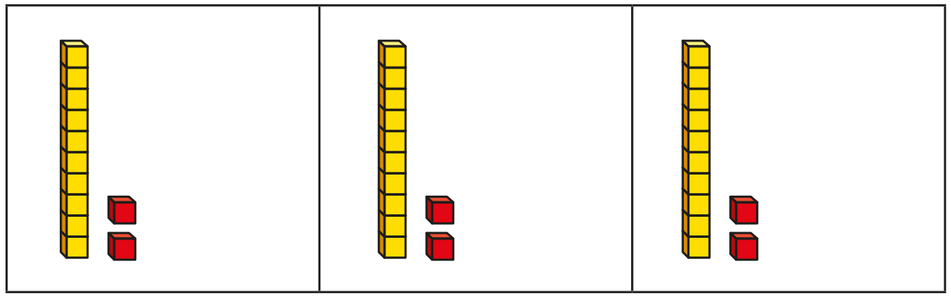
Do you agree with Dexter? yes

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



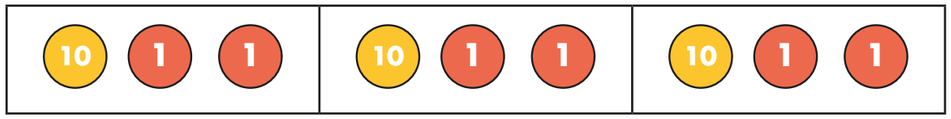
Use Huan's method to complete the calculations.

a) $\frac{1}{3}$ of 63 = 21

c) $\frac{1}{4}$ of 92 = 23

b) $\frac{1}{4}$ of 48 = 12

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 = 32

c) $\frac{1}{4}$ of 52 = 13

b) $\frac{1}{5}$ of 60 = 12

7 Which amount is greater? Tick your answer.

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

Show your workings.

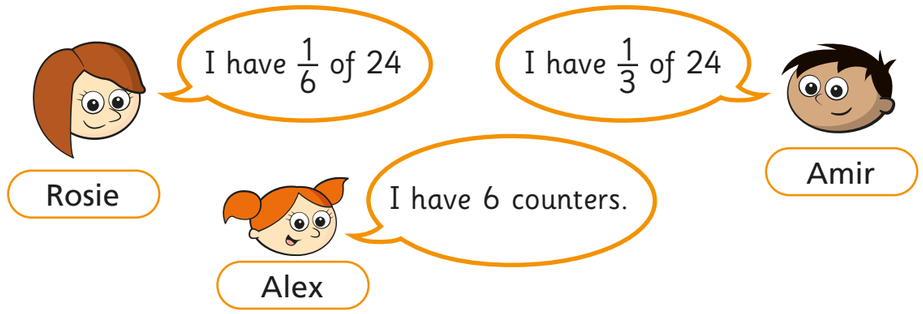
8 Complete the number sentences.

a) $\frac{1}{2}$ of 60 = 30

c) $\frac{1}{5}$ of 250 = 50

b) $\frac{1}{4}$ of 80 = 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? $\frac{1}{4}$

c) Rosie and Amir put their counters together.

Write their total number of counters as a fraction of 24

$\frac{12}{24}$

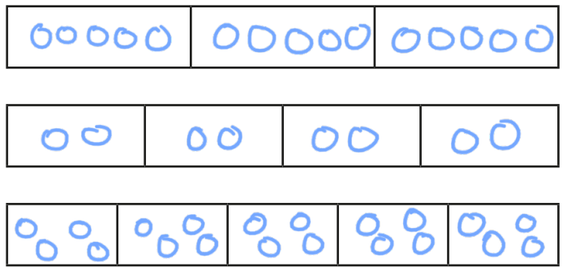
Fractions of a set of objects (2)

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

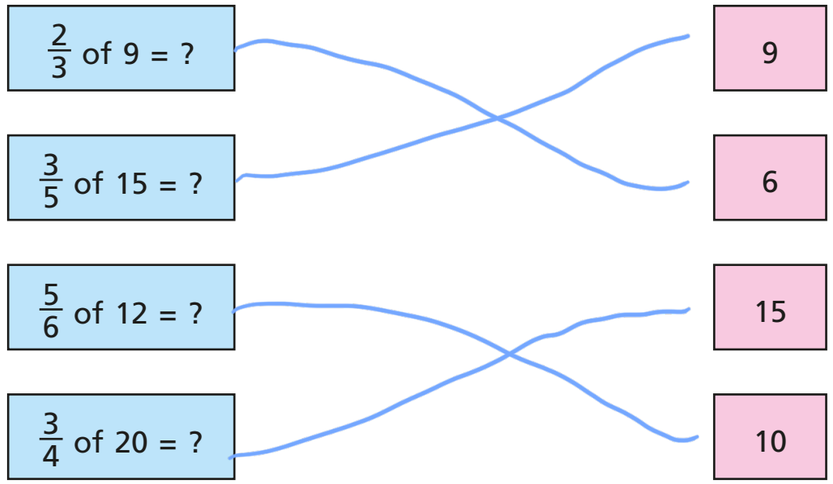
a) $\frac{2}{3}$ of 15 = 10

b) $\frac{3}{4}$ of 8 = 6

c) $\frac{2}{5}$ of 20 = 8



2 Match the questions and answers.

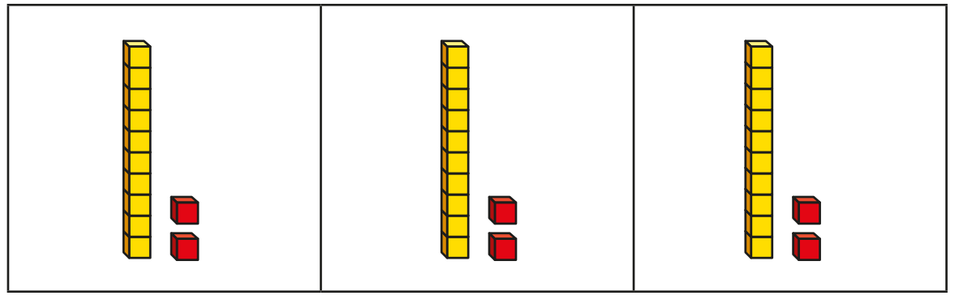


3 What is $\frac{6}{6}$ of 18?

18

How do you know?

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



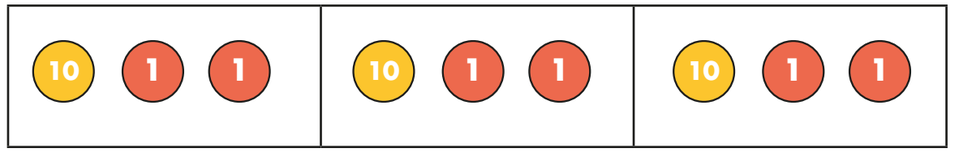
Use Brett's method to complete the number sentences.

a) $\frac{2}{3}$ of 63 = 42

b) $\frac{3}{4}$ of 48 = 36

c) $\frac{3}{4}$ of 92 = 69

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 = 64

b) $\frac{3}{5}$ of 60 = 36

c) $\frac{3}{4}$ of 52 = 39

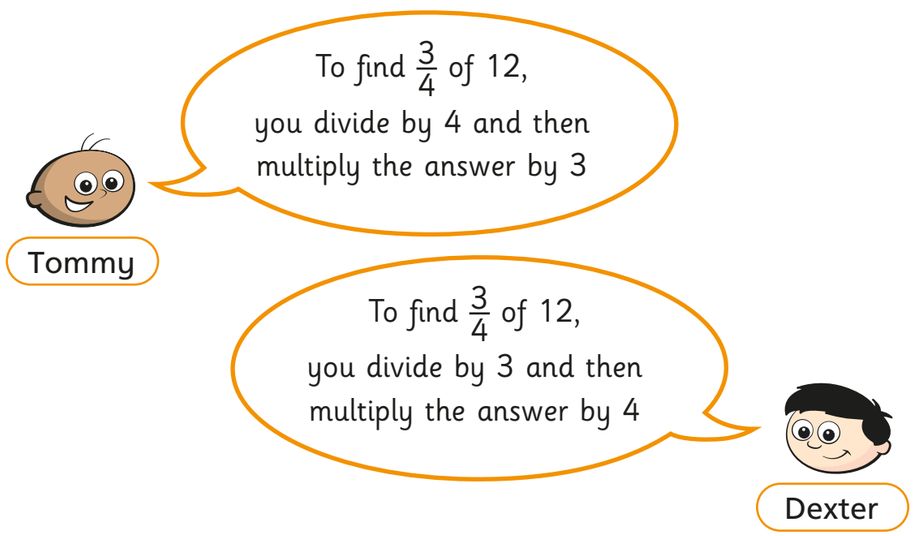
6 Complete the number sentences.

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

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

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

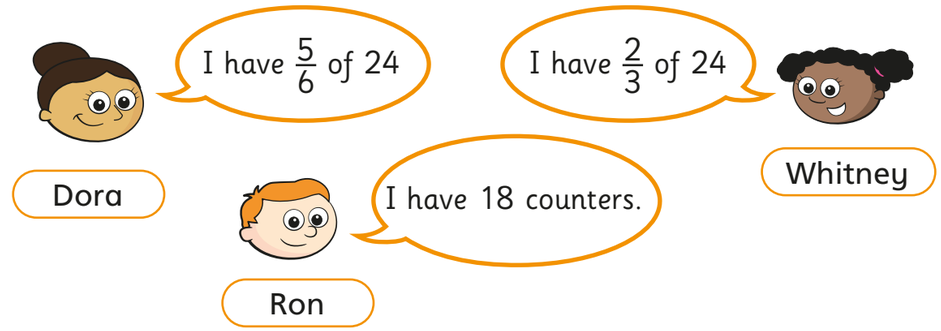
7



Who is correct? Tommy

How do you know? Show your working.

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

4

9 Write fractions to make the statements correct.

e.g.

$\boxed{\frac{1}{6}}$ of 36 < 18

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

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

How many different answers can you find for each?

Compare with a partner.