

Lesson 32 LO: To use non-unit fractions



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4

Numerator

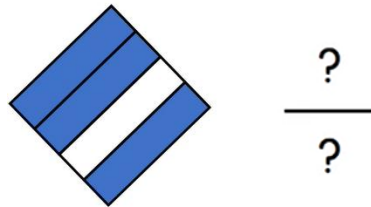
(number on the top)

Denominator

(number on the bottom)

1. Count **how many equal parts** there are **altogether**. Write it as your **denominator**.
2. Count **how many parts have been shaded**. Write it as your **numerator**.

Model: What fraction of this shape has been shaded?



First, count how many equal parts there are altogether.
There are 4.

This tells us the **denominator**: $\frac{?}{4}$

Next, count how many parts have been shaded.
There are 3.

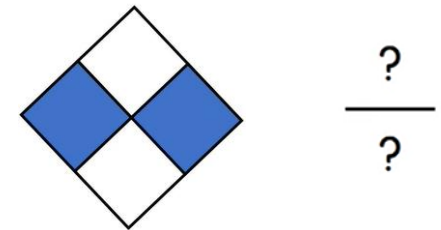
This tells us the **numerator**: $\frac{3}{4}$

So: 3 out of 4 parts are shaded or we can say $\frac{3}{4}$ **of the shape is shaded.**

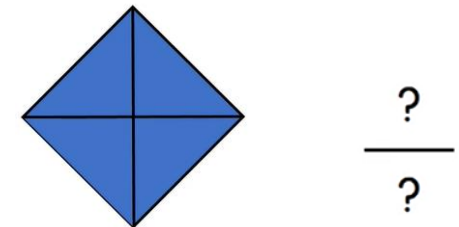
Now you try:

What fraction of this shape has been shaded?

a)



b)




Now complete the questions below.




Non-unit fractions


1 Complete the sentences.

a)  There are 3 equal parts.
 There are 2 parts shaded.

is shaded.

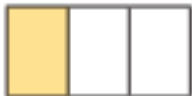

b)  There are equal parts.
 There are parts shaded.

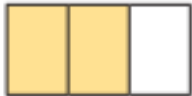

is shaded.

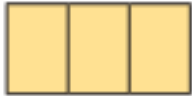

c)  There are equal parts.
 There are parts shaded.

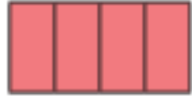
is shaded.

2 What fraction of each shape is shaded?



a)  b) 


 



3 Colour $\frac{2}{3}$ of each shape.



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Year 3 Maths Lesson 32

LO: To find fractions of amounts

Success Criteria:

1. Look at the denominator e.g. $\frac{1}{4}$
2. Split the bar into the number of parts the denominator says e.g. 4
3. Divide the amount equally between the parts
4. Count how many in one part

Model:

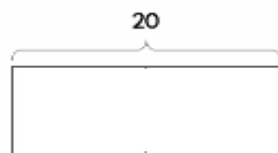
Sarah had 20 seeds.

$\frac{1}{2}$ the seeds were basil.

How many seeds were basil?



Use a bar model to help.

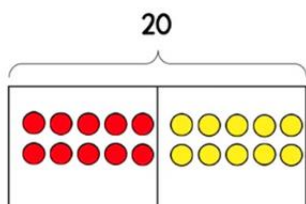


The denominator of $\frac{1}{2}$ is 2.

So split the bar into 2 parts.



Now share 20 equally between the two bars:



$$\frac{1}{2} \text{ of } 20 = 10$$

$$20 \div 2 = 10$$

Model:

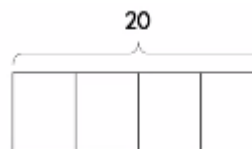
Juliet's bunny Rex had 20 dandelions in his run.

He ate $\frac{1}{4}$ of them.

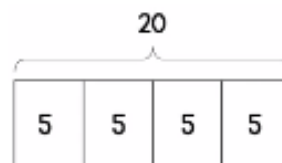
How many did he eat?



The denominator of $\frac{1}{4}$ is 4.
So split the bar into 4 parts.



Now share 20 equally between the four bars:

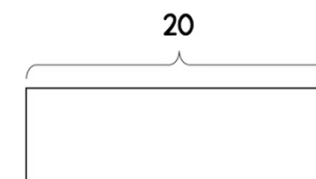


$$\frac{1}{4} \text{ of } 20 = 5$$

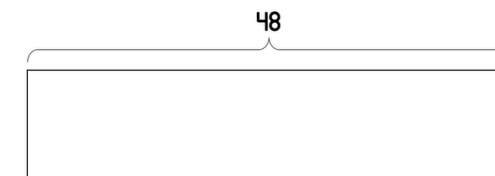
$$20 \div 4 = 5$$

Now you try:

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



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



Tip! You could use place value counters to help divide the tens first, then the ones.





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.

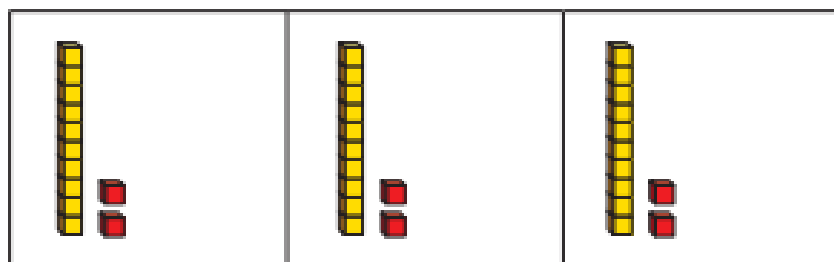
4

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	

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- 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