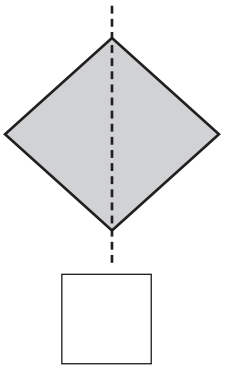
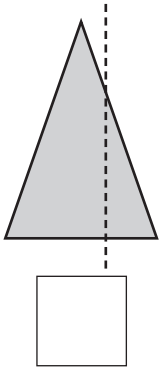
Fractions – equal parts

1 ✓ the shapes that have been divided into **equal** parts.

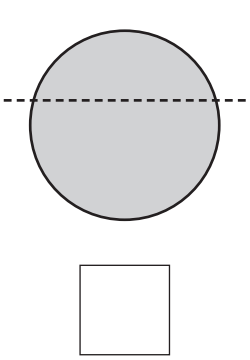
a



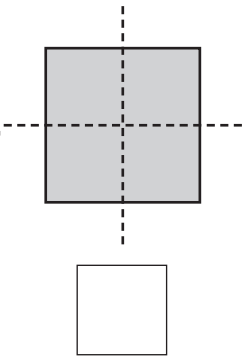
b



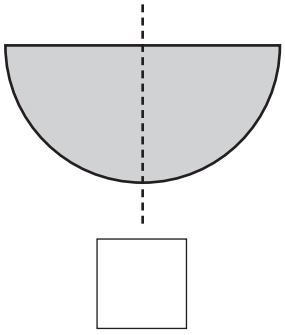
c



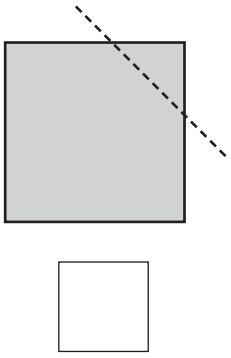
d



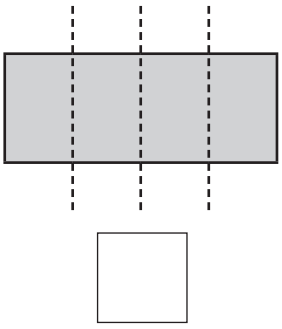
e



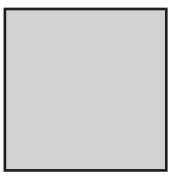
f

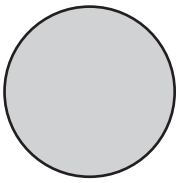


g



2 Divide these shapes into equal parts.

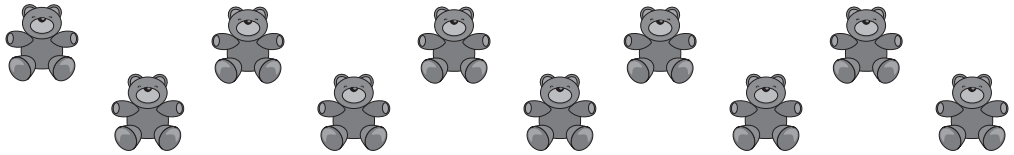






Is there only one way to do this? Compare your shapes with someone else at your table. Have you divided them the same way? Is one of you wrong or can you both be right?

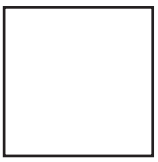
3 You and your partner have been given these teddies. Divide the group into 2 equal parts so you each get a fair share.



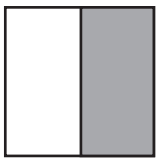
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Fractions – writing fractions

When we divide a whole into 2 equal parts, we call each part a half.



This is one whole shape.

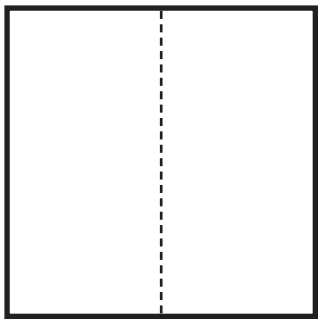


Half has been shaded.

We can write half as $\frac{1}{2}$ $\frac{\text{Number of shaded parts}}{\text{Number of equal parts}}$

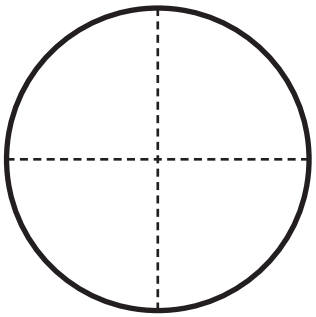
1 Shade **one** equal part of each shape and write the fraction.

a



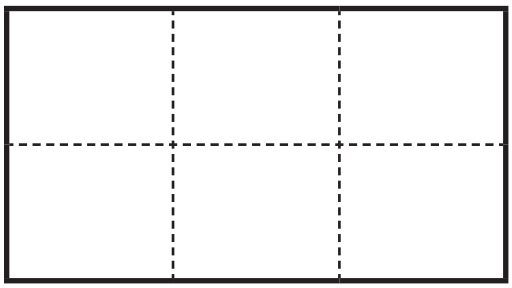
Number of shaded parts $\frac{\square}{2}$ Number of equal parts

b



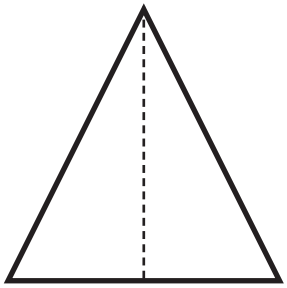
Number of shaded parts $\frac{\square}{4}$ Number of equal parts

c



Number of shaded parts $\frac{\square}{\square}$ Number of equal parts

d



Number of shaded parts $\frac{\square}{\square}$ Number of equal parts

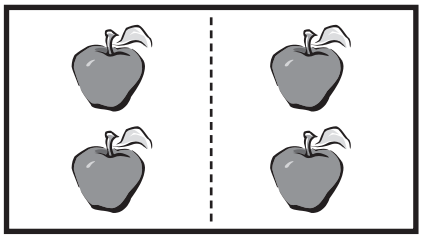
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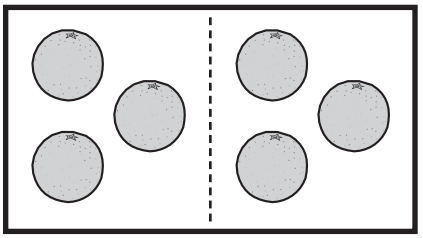
Fractions – half of a group

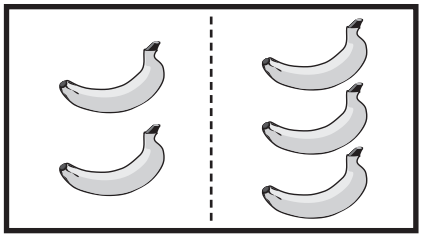
When we divide a group into 2 equal parts, we call each share or part a half. When they are equal, each share is fair.

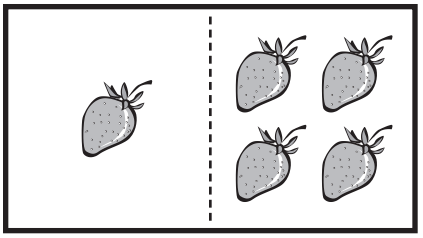
$\frac{1}{2}$   $\frac{1}{2}$

1 Tick all the groups that have been divided into 2 equal parts. Cross them if the parts are not equal.

a 

b 

c 

d 

2 Draw a group of hats in the box. Put half on one side of the line and half on the other. Are the parts equal? If so, tick the box.

3 Draw a group of stars in the box. Make the two parts unequal. Do you tick or cross the box?

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Fractions – half of a group

You will need:  a partner  counters

What to do:

a Start with 2 counters. Divide the 2 counters into 2 equal groups. How many counters are in each group? Draw them.

$\frac{1}{2}$ of 2 is ☐

b Now take 4 counters. Divide the counters into 2 equal groups. How many counters are in each group? Draw them.

$\frac{1}{2}$ of 4 is ☐

c Now take 6 counters. Divide the counters into 2 equal groups. How many counters are in each group? Draw them.

$\frac{1}{2}$ of 6 is ☐

d Now take 8 counters. Divide the counters into 2 equal groups. How many counters are in each group? Draw them.

$\frac{1}{2}$ of 8 is ☐

e Can you see the pattern? Continue it on another piece of paper. How high can you and your partner go?

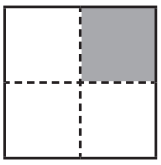
What to do next:

Can you make 2 equal groups out of 3, 5, or 7 counters? What happens?

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Fractions – quarters

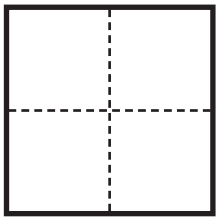
When we divide a shape or group into 4 equal parts, we call each part a **quarter**. We can write this as:

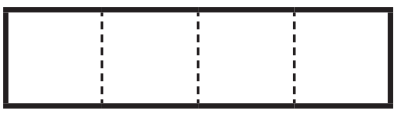


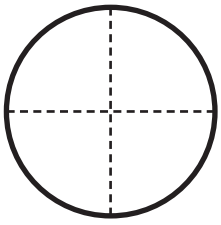
$\frac{1}{4}$ $\frac{\text{Number of shaded parts}}{\text{Number of equal parts}}$

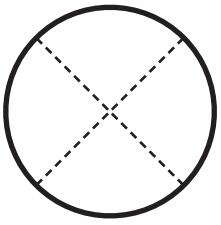
1 Can you think of 3 places or times you hear the word quarter? Discuss this with the people at your table.

2 Shade one quarter of each shape and write the fraction.

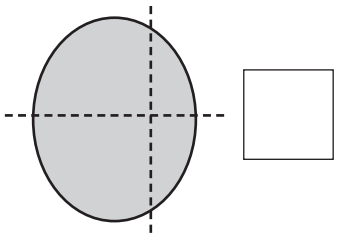
a  ☐/☐

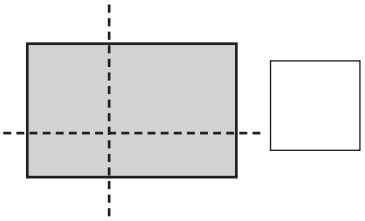
b  ☐/☐

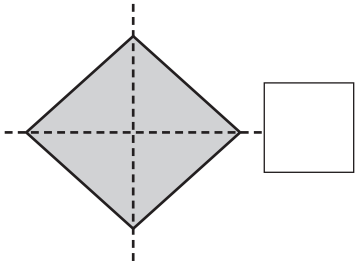
c  ☐/☐

d  ☐/☐

3 Are these shapes cut into quarters? Write Y or N.

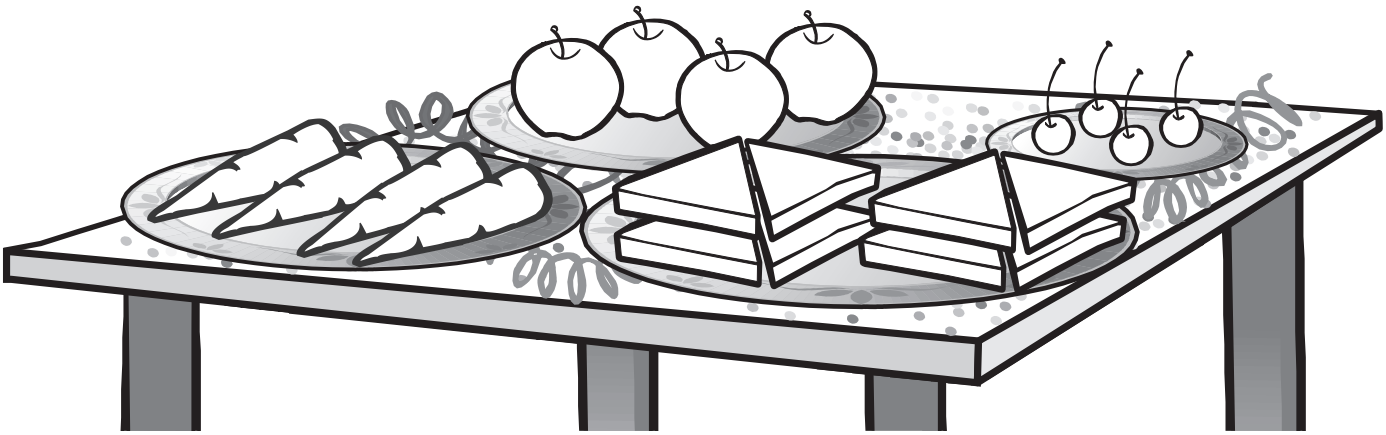
a  ☐

b  ☐

c  ☐

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Fractions – quarters



1 Four friends are having a party. Look at the food on the table. Share it equally out onto the plates so that each friend has **one quarter**. Draw what each friend will have.

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Fractions – quarters

You will need:  a partner

What to do:

Can you and your partner find 4 different ways to divide these squares into quarters? Draw the lines you would use.

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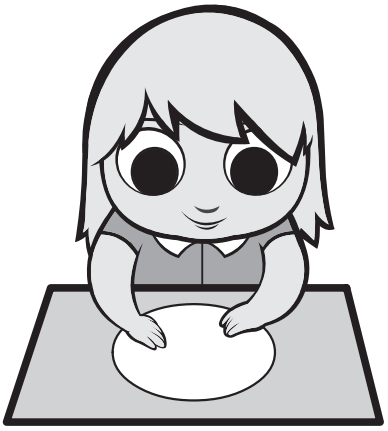
Fractions – halves and quarters

You will need: scissors 4 coloured paper circles

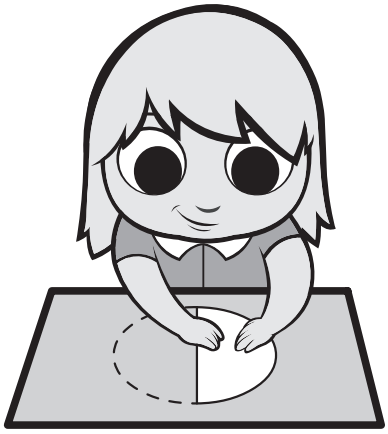
C copy

What to do:

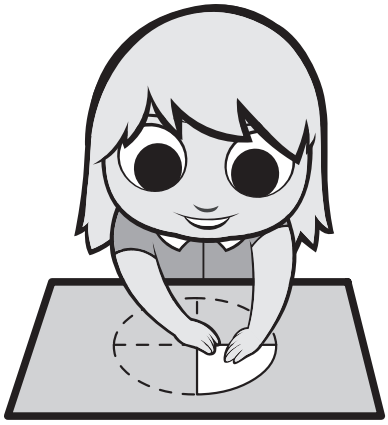
a Leave one circle whole.



b Fold one circle in half.



c Fold another circle in half and then in half again.



d Cut out the labels on the right and match them with the circles above.

e Now mix them up and ask a friend to put them back correctly.

1	one quarter
$\frac{1}{4}$	one half
$\frac{1}{2}$	one whole

What to do next:

What happens if you fold a circle into half, then half again, then half again. How many equal parts do you have? How would you write that as a fraction?

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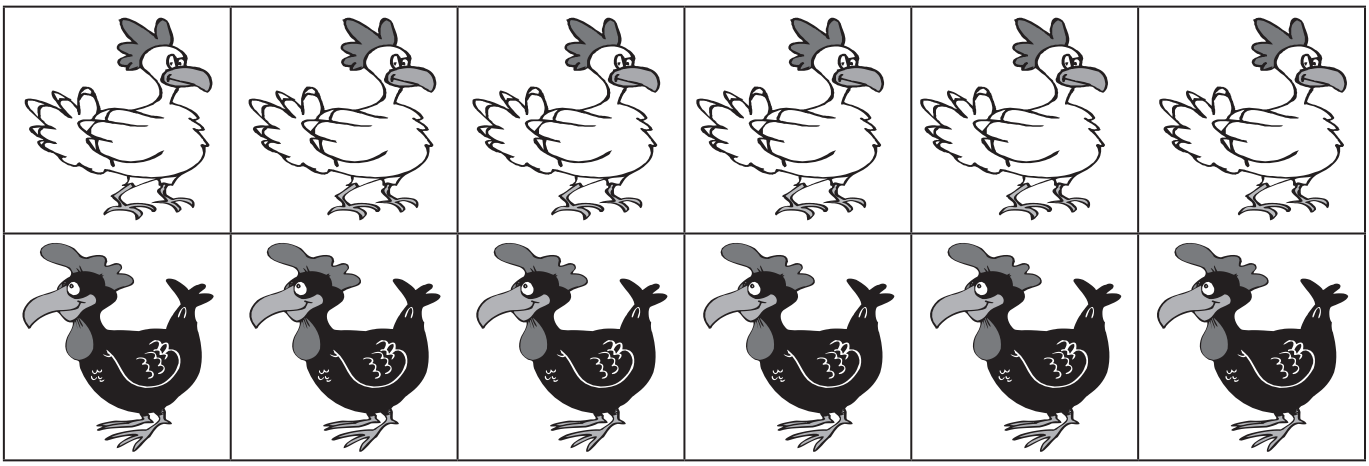
Fractions – halves and quarters

You will need: pencils

What to do:



Farmer Joe has 12 chickens in his barn. Half of his chickens are black and half are white. They all like their own special laying spot. Here is one way Farmer Joe could set them up.



a How many other ways could Farmer Joe set them up? Colour the chickens in each barn on page 68 to show the different options. Remember half are black and half are white. You may need 2 copies of page 68.

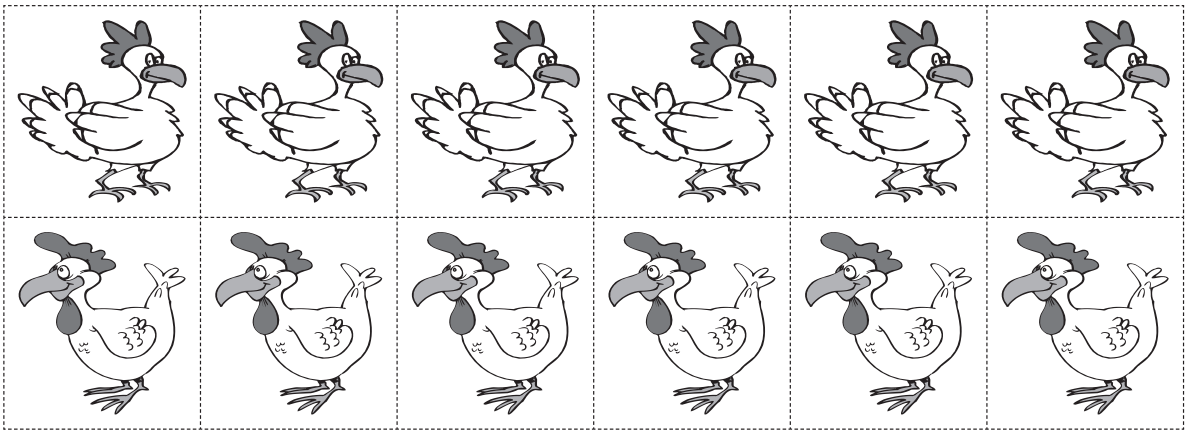
b How will you know you have coloured half each time?

c How will you know you have found all the ways?

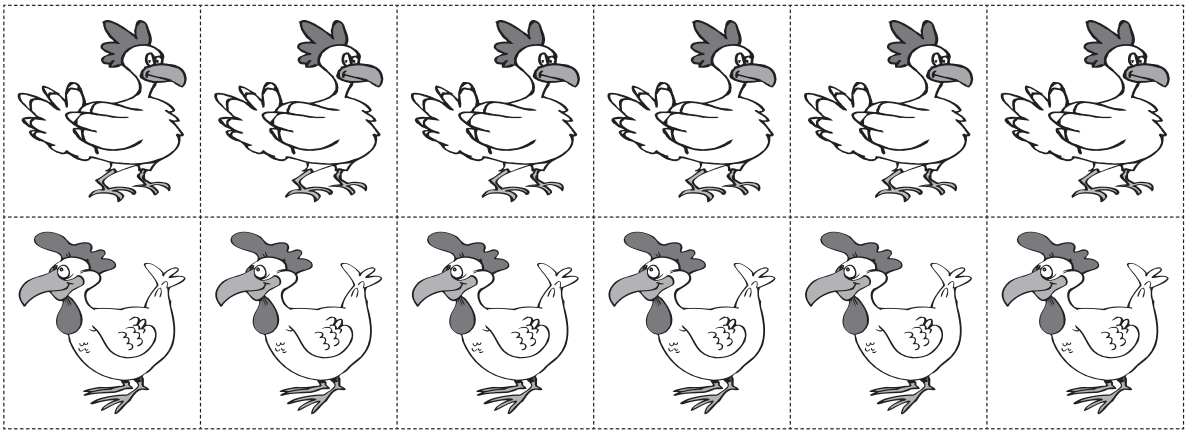
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Fractions – halves and quarters (continued)

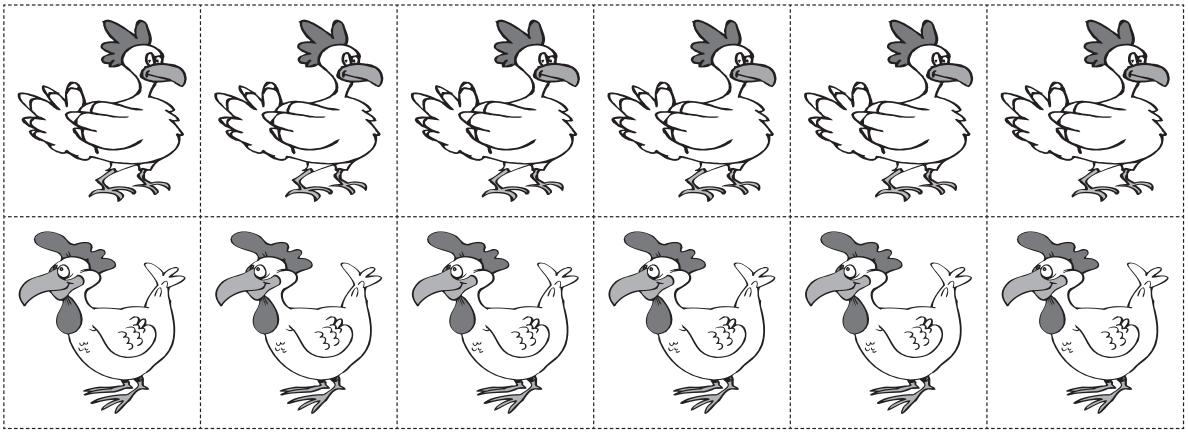
Option 1



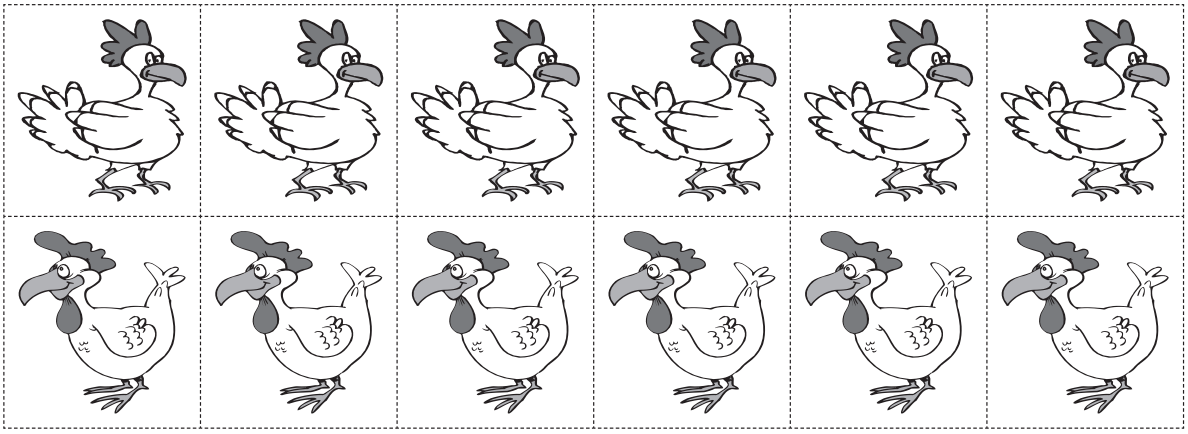
Option 2



Option 3



Option 4



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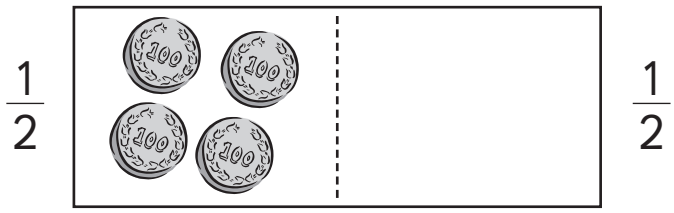
Fractions – halves and quarters

You will need:  a partner or just yourself

What to do:

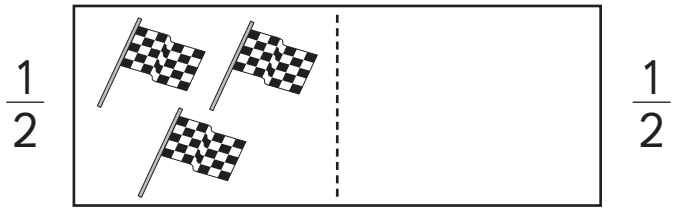
Draw pictures to help you solve these Grand Prix problems.

a This is half of the prize.



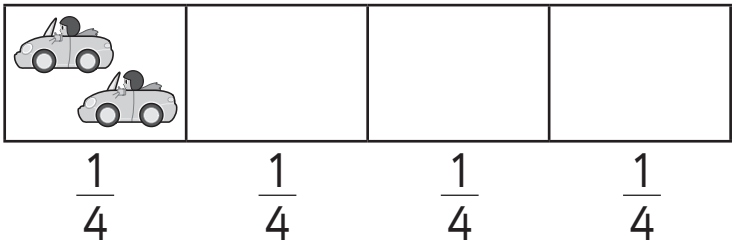
How many pieces of gold are in the whole prize?

b This is half of the flags at the race.



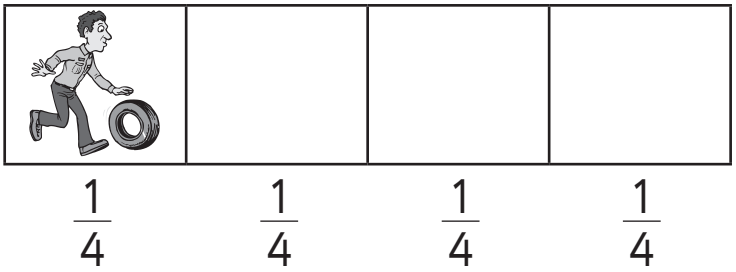
How many flags are at the race?

c This is one quarter of the cars on the track.



How many cars are on the whole track?

d This is one quarter of the pit crew.

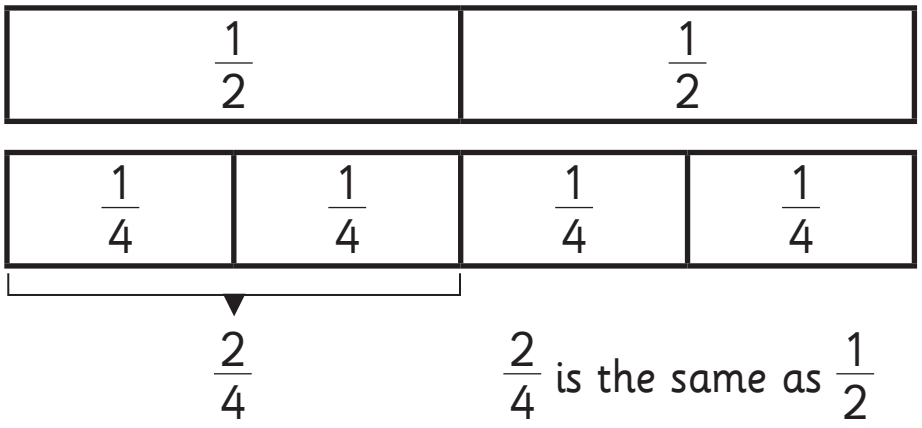


How many people are in the pit crew altogether?

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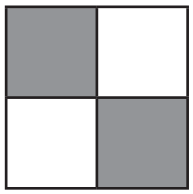
Fractions – halves and quarters

Some fractions are of equal size. We call these equivalent fractions.

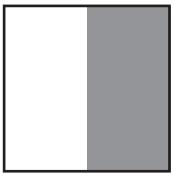


This can also be written as $\frac{2}{4} = \frac{1}{2}$

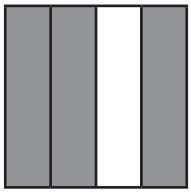
1 ✓ the fraction equivalent to $\frac{1}{2}$.

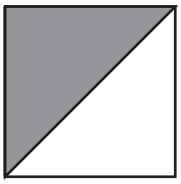
a  ☐

b  ☐

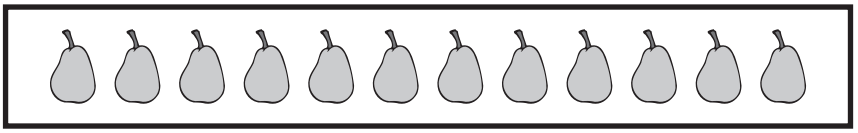
c  ☐

d  ☐

e  ☐

f  ☐

2 Calculate.

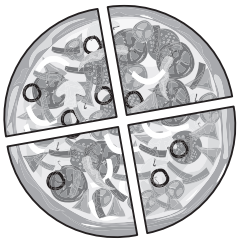


a $\frac{2}{4}$ of 12 = ☐

b $\frac{1}{2}$ of 12 = ☐

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Fractions – quarters and three quarters

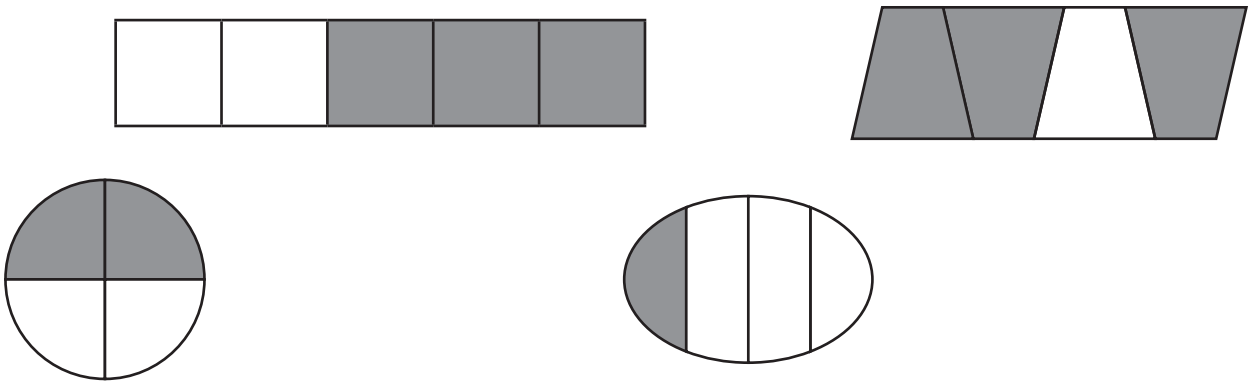


This pizza has been split in to 4 equal parts.
Each equal part is called a quarter.

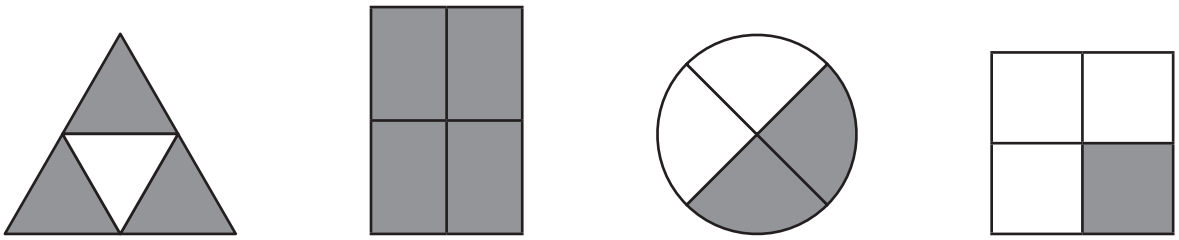


One piece of pizza has been eaten. There are 3 out of the total 4 pieces left. This can be called three quarters.
This can also be written as $\frac{3}{4}$.

1 Circle the shape that is three quarters ($\frac{3}{4}$) shaded.



2 Match the fraction to the picture.

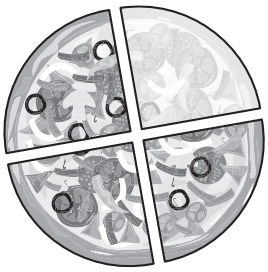


$\frac{1}{4}$ $\frac{2}{4}$ $\frac{3}{4}$ $\frac{4}{4}$

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Fractions – quarters and three quarters

To write fractions you need to know how many parts make up the whole and how many are shaded.

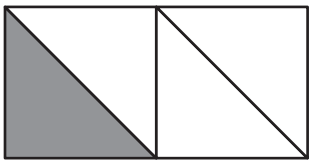


4 parts make the whole pizza. 3 parts are shaded.

$$\frac{\text{parts shaded}}{\text{parts that make the whole}} \quad \frac{3}{4}$$

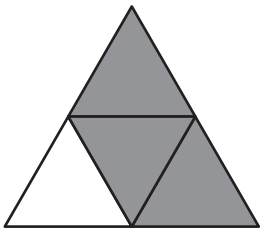
1 Write the fraction for each picture.

a



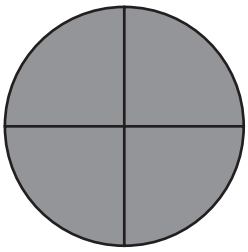
$\frac{\square}{\square}$

b



$\frac{\square}{\square}$

c



$\frac{\square}{\square}$

d

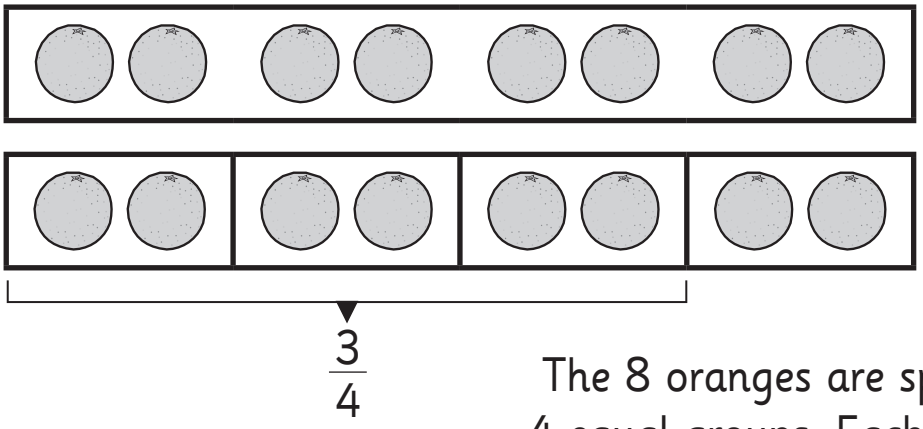


$\frac{\square}{\square}$

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Fractions – quarters and three quarters

There are 8 oranges in total. They make up the whole.



$\frac{3}{4}$

The 8 oranges are split in to 4 equal groups. Each group is one quarter of the whole.

$\frac{1}{4}$ of 8 = 2 $\frac{3}{4}$ of 8 = 6

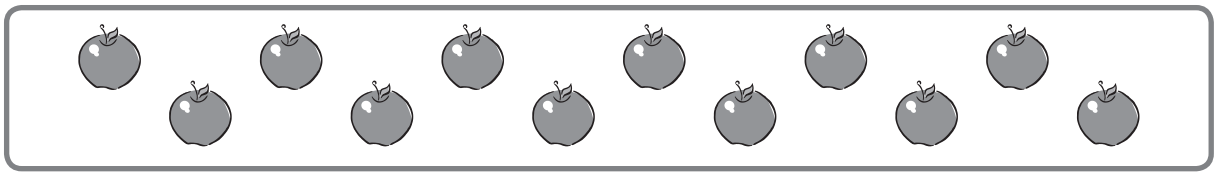
1 Circle to divide the objects into 4 equal groups. Complete the number sentences.

a



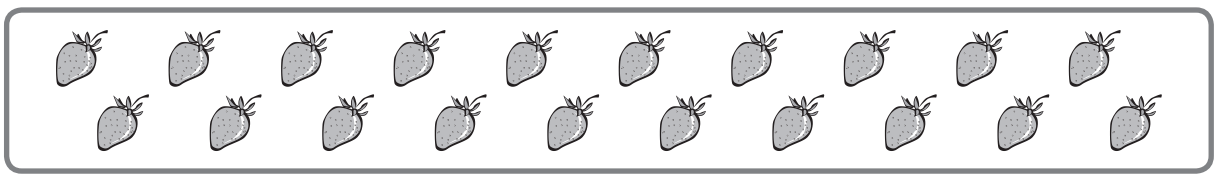
$\frac{1}{4}$ of 4 = ☐ $\frac{3}{4}$ of 4 = ☐

b



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

c



$\frac{1}{4}$ of 20 = ☐ $\frac{3}{4}$ of 20 = ☐

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Fractions – quarters and three quarters

1 Match the fraction to the answer.

$\frac{1}{4}$ of 12	5
$\frac{3}{4}$ of 8	3
$\frac{1}{4}$ of 20	9
$\frac{3}{4}$ of 4	6
$\frac{1}{4}$ of 8	2
$\frac{3}{4}$ of 12	3

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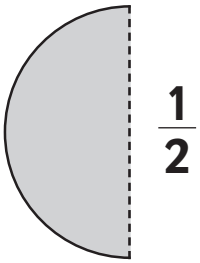
Fractions – exploring further

You will need: a partner, coloured paper circles cut in half, blank paper or your maths book

What to do:

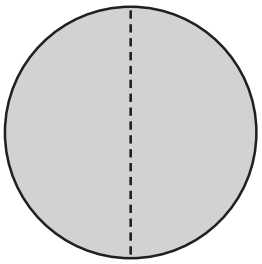
Can you count in halves? It's easier than you may think!
Look at the pattern below.

We start with half a circle.
That is $\frac{1}{2}$.



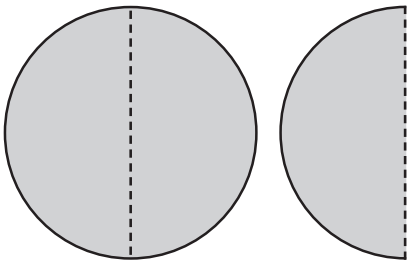
$\frac{1}{2}$

We add another half circle.
That is 1 whole.



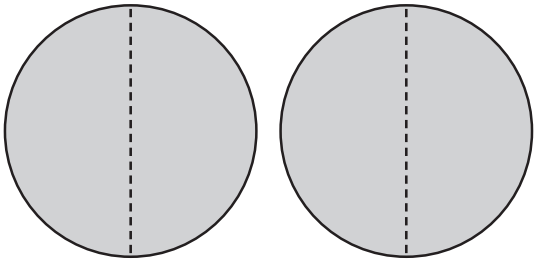
1

We add another half a circle.
We have 1 whole and 1 half.
We write this as $1\frac{1}{2}$.



$1\frac{1}{2}$

We add another half a circle.
Now we have 2 wholes.

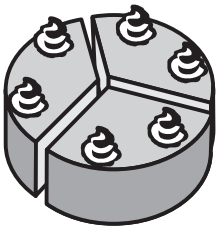


2

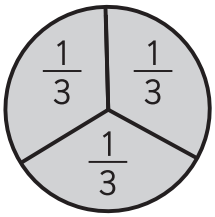
Work with your partner to make this pattern with your own circles.
Label each set. Can you continue the pattern? How high can you go?

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Fractions – thirds

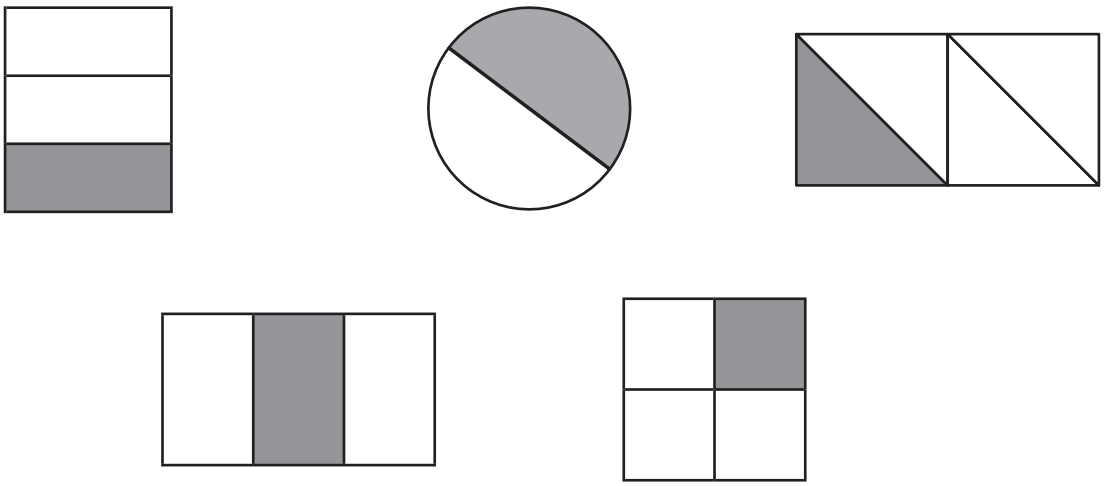


This cake has been cut in to 3 equal parts.
Each part is called one third.



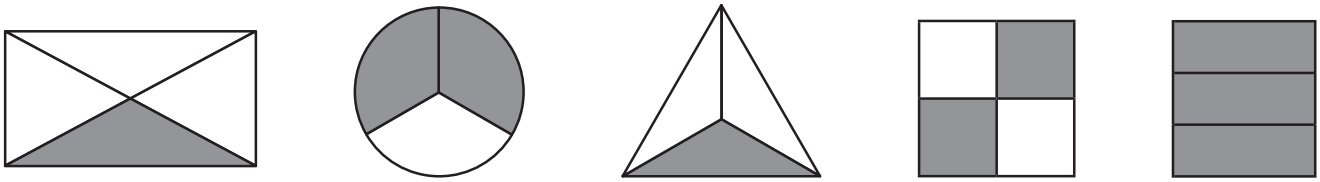
This cake has been cut in to 3 equal parts.
Each part is call one third. This can be written as $\frac{1}{3}$.

1 Circle the fractions that have one third ($\frac{1}{3}$) shaded.



2 Match the fraction to the picture.

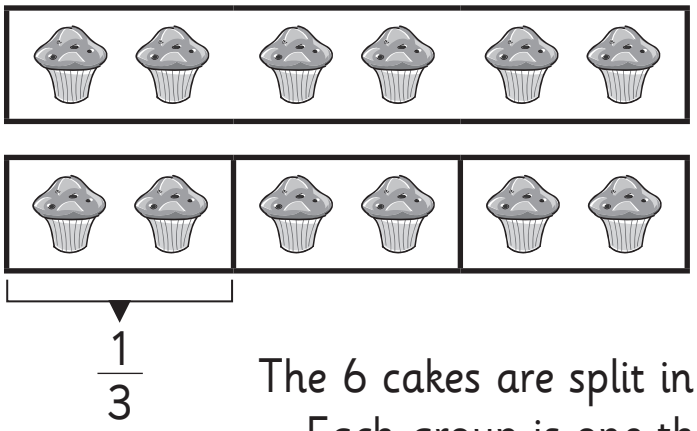
$\frac{1}{3}$ $\frac{2}{3}$ $\frac{3}{3}$



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Fractions – thirds

There are 6 cakes in total. They make up the whole.



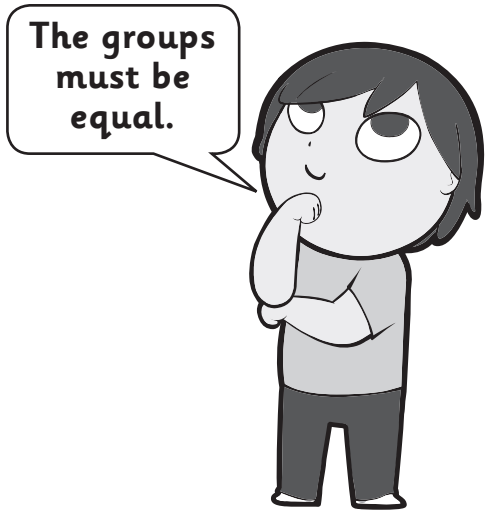
whole

$\frac{1}{3}$

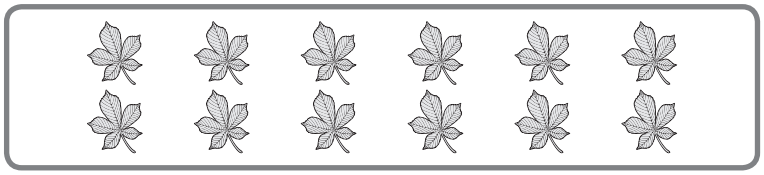
The 6 cakes are split in to 3 equal groups.
Each group is one third of the whole.

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

1 Circle to divide the objects into 3 equal groups. Complete the number sentence.

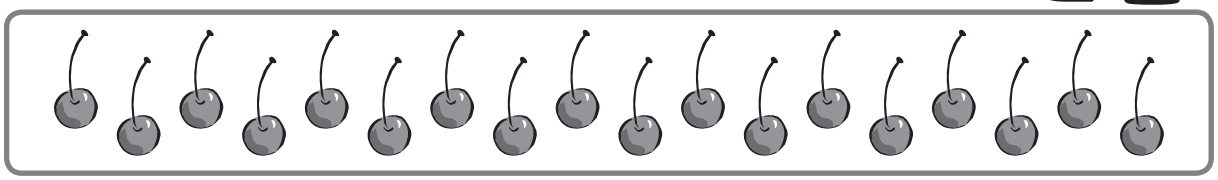


a



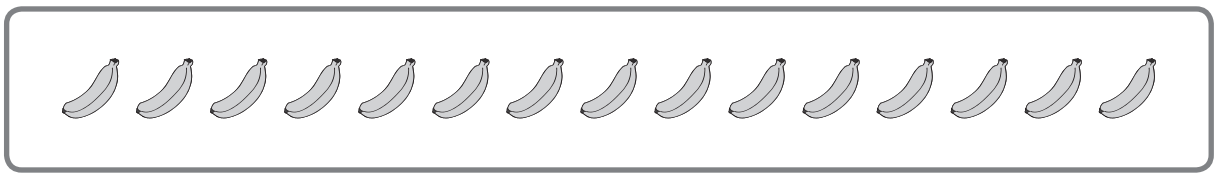
$\frac{1}{3}$ of 12 = ☐

b



$\frac{1}{3}$ of 18 = ☐

c



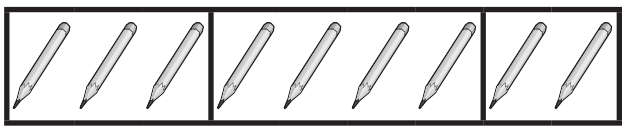
$\frac{1}{3}$ of 15 = ☐

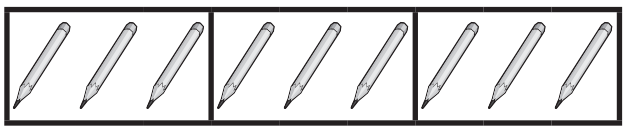
Hint: Use counters to help you divide the objects into groups.

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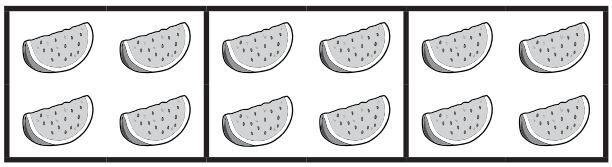
Fractions – thirds

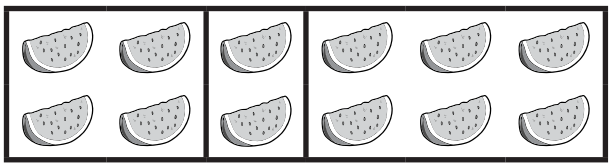
1 Circle the image that shows $\frac{1}{3}$ of 9.





2 Circle the image that shows $\frac{1}{3}$ of 12.





3 Complete the number sentences.

a $\frac{1}{3}$ of 12 = ☐

b $\frac{1}{3}$ of 6 = ☐

c $\frac{1}{3}$ of 9 = ☐

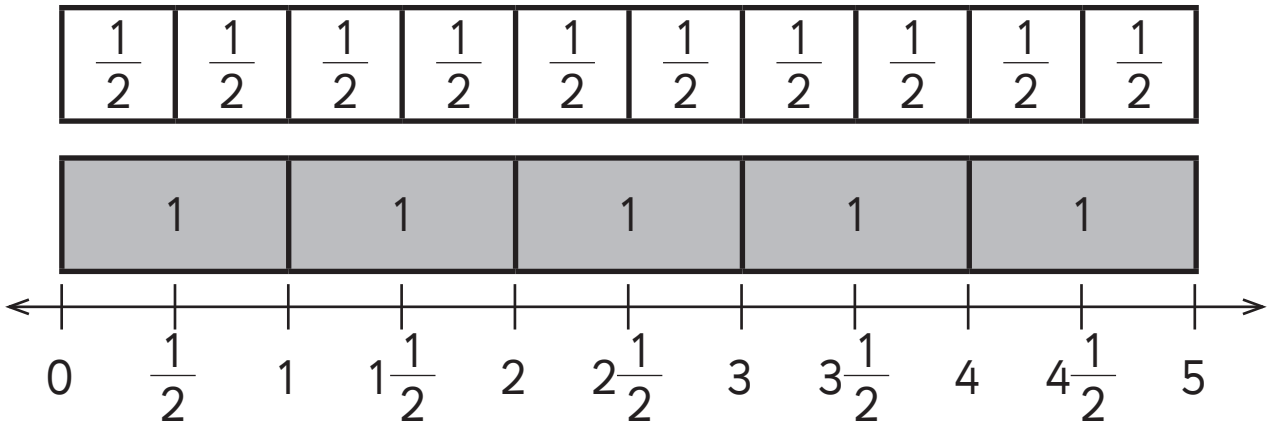
d $\frac{1}{3}$ of 15 = ☐

e $\frac{1}{3}$ of 18 = ☐

f $\frac{1}{3}$ of 3 = ☐

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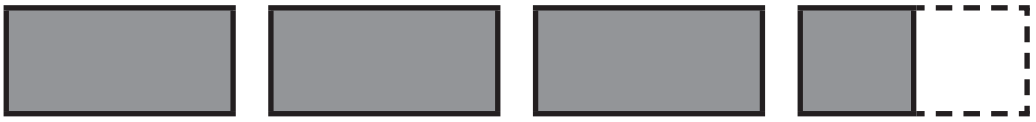
Fractions – counting in halves



We can use the number line to count in halves.

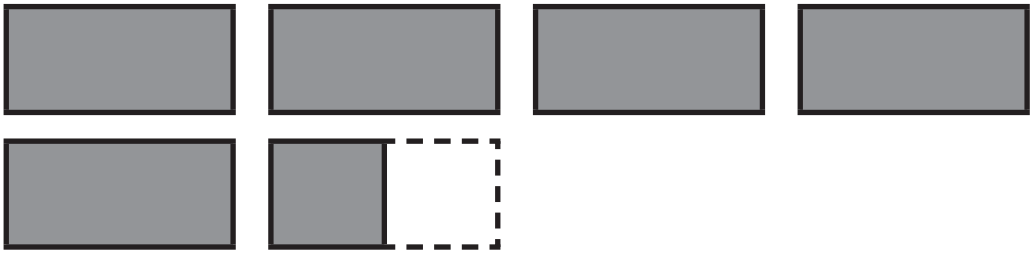
1 How many pieces are there?

a



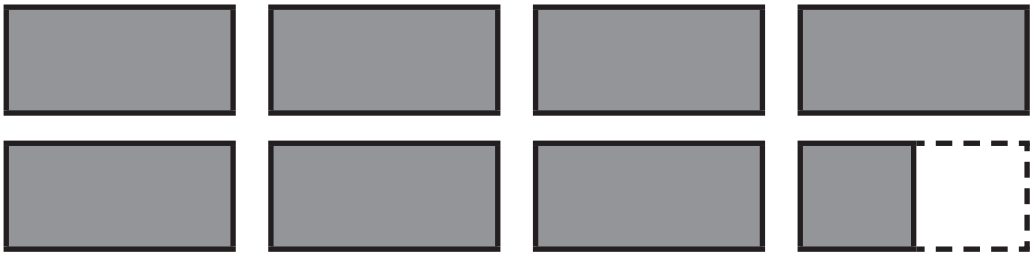
.....

b



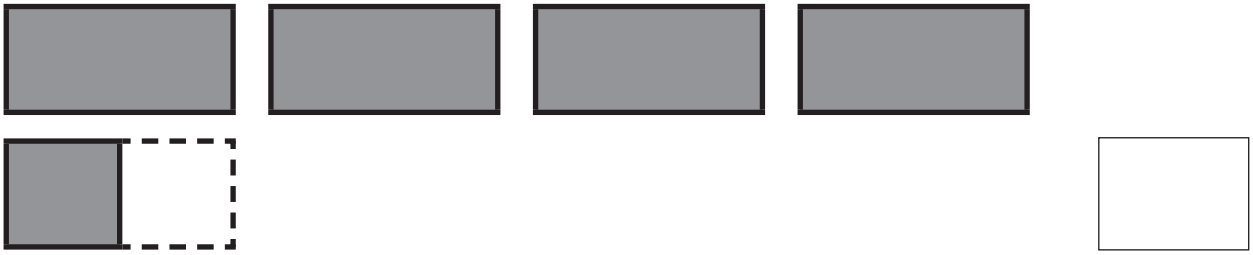
.....

c



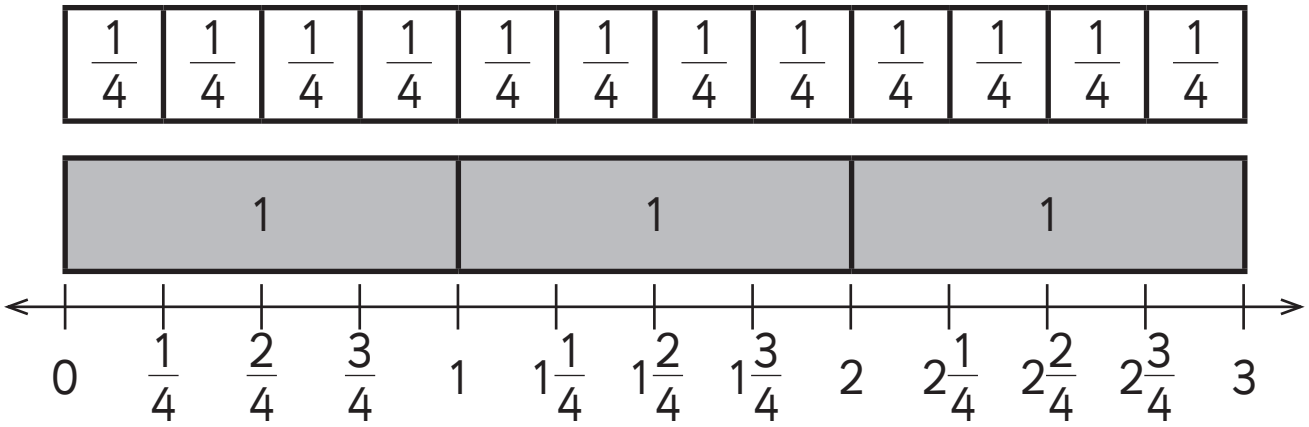
.....

d



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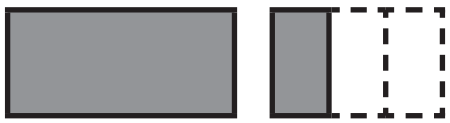
Fractions – counting in quarters



We can use the number line to count in quarters.

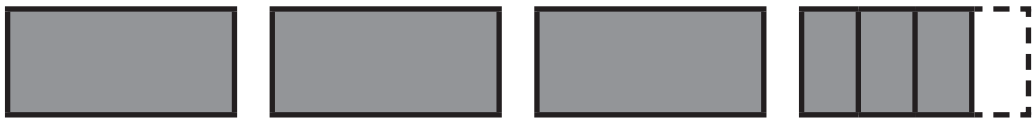
1 How many pieces are there?

a



.....

b



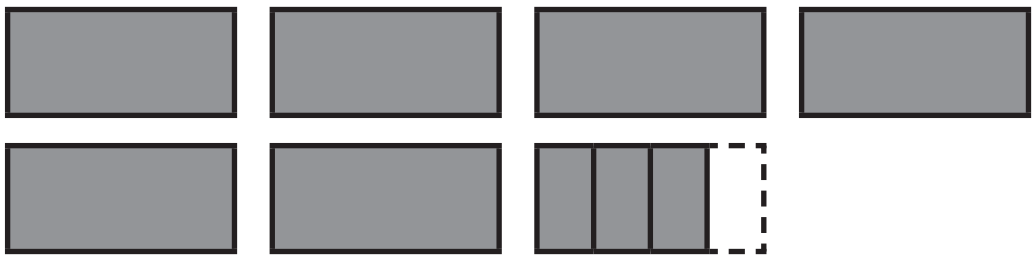
.....

c



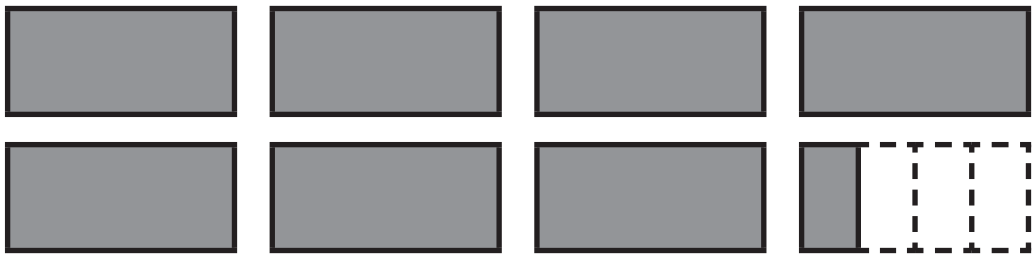
.....

d



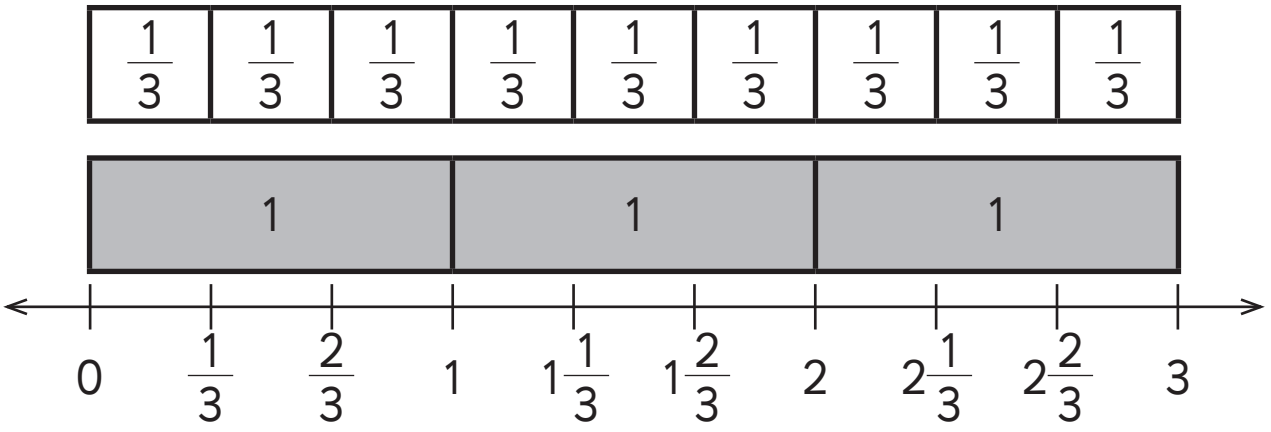
.....

e



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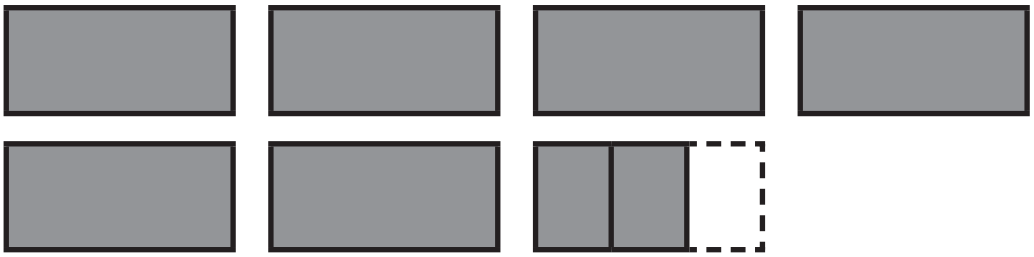
Fractions – counting in thirds

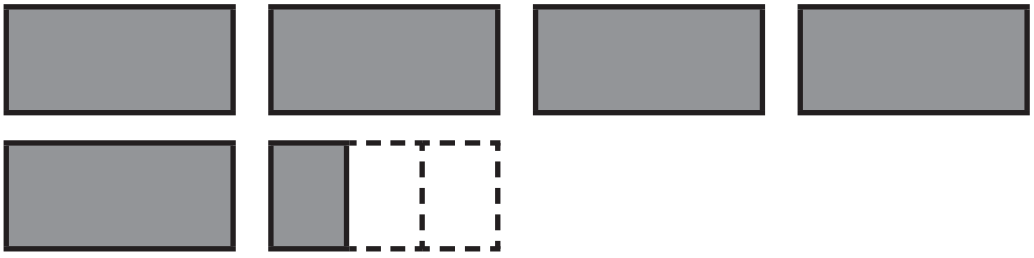


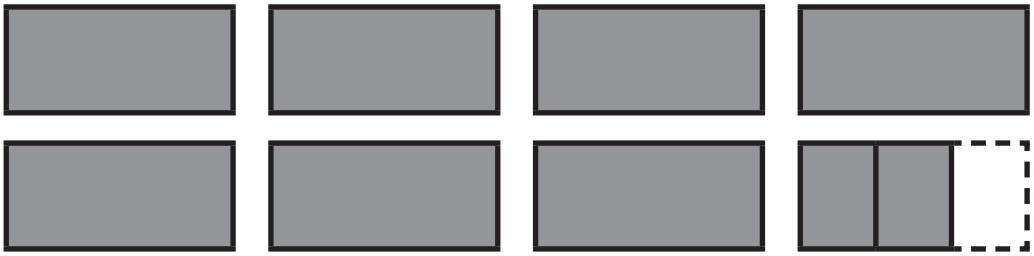
We can use the number line to count in thirds.

1 How many pieces are there?

a  .....

b  .....

c  .....

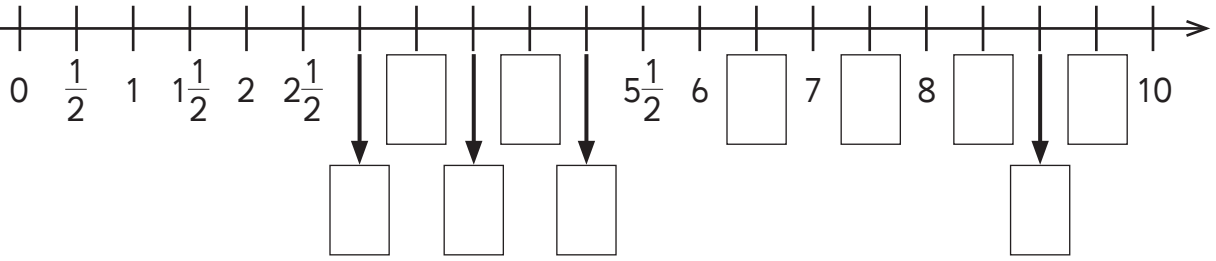
d 

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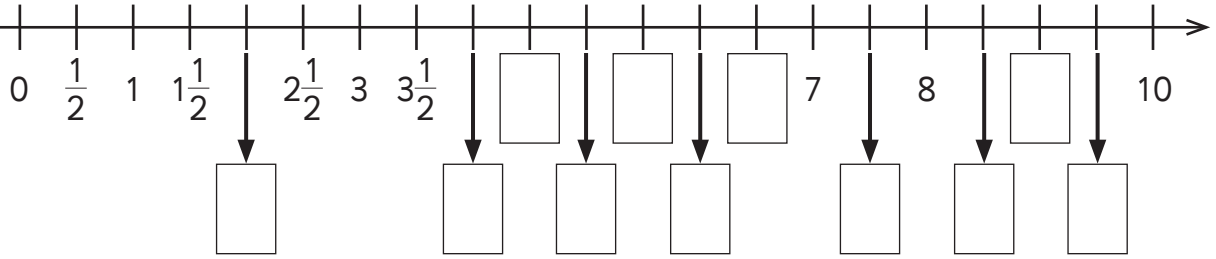
Fractions – counting on a number line

1 Count on the number line and fill in the missing numbers.

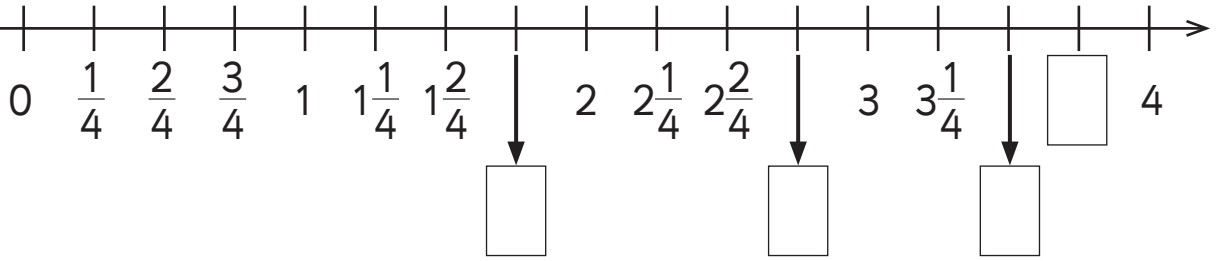
a



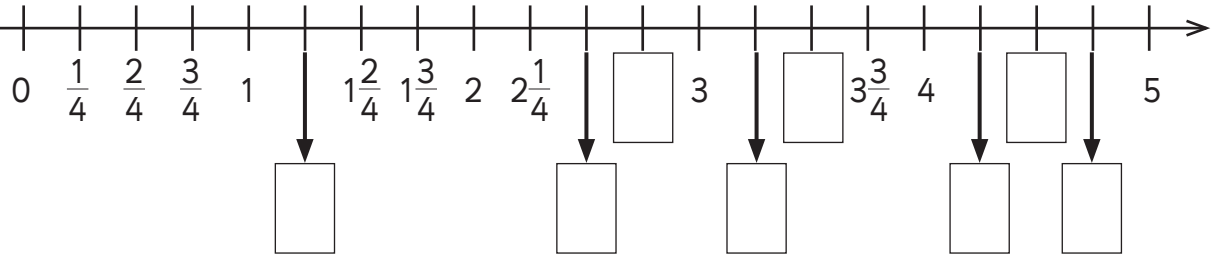
b



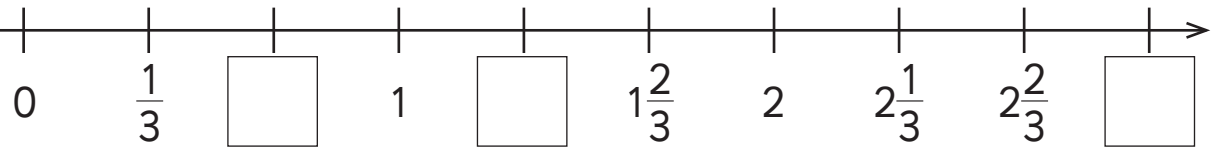
c



d



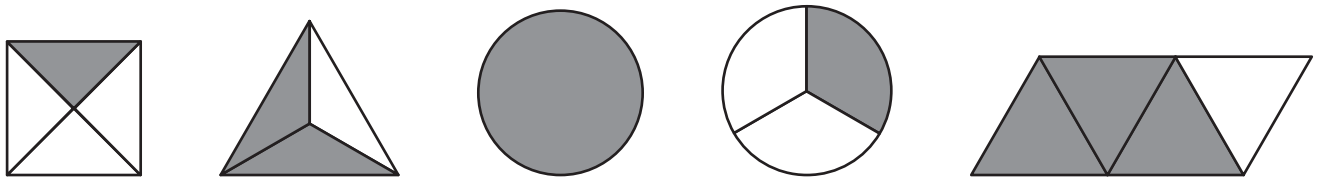
e



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Fractions – writing fractions

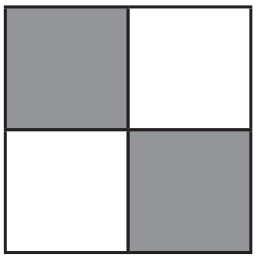
1 Match the picture to the fraction.



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

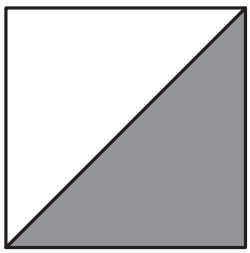
2 Write the fraction for the shape.

a



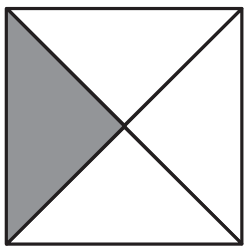
$\frac{\square}{\square}$

b



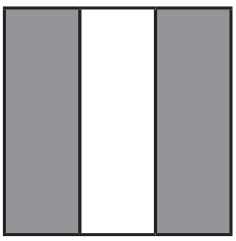
$\frac{\square}{\square}$

c



$\frac{\square}{\square}$

d



$\frac{\square}{\square}$

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