Contents

This shows us what page to turn to.

The first page of a lesson is a maths problem. Don't look at the next page until you have had a go! The third and fourth pages give you practice, so you can check your understanding.

Unit fractions

Discover

FLAGS OF THE WORLD

Mauritius   Monaco

Chad   Germany

1 a) What fraction of ⬜ is each stripe?

What fraction of ⬜ is each stripe?

b) What is the same and what is different about the flags?

Share

a)

This flag has 2 equal parts altogether.

Each stripe is I part.

Each stripe is $\frac{1}{2}$ of the flag.

This flag has 3 equal parts altogether.

Each stripe is I part.

Each stripe is $\frac{1}{3}$ of the flag.

We call the fraction $\frac{1}{3}$ one **third**.

b) Each flag is split into equal parts.

The number of equal parts is different.
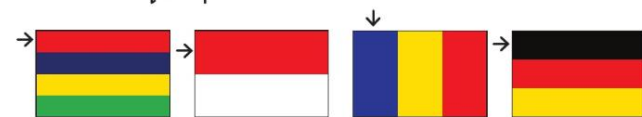
The flag has	4 parts	2 parts	3 parts	3 parts
Each stripe is	$\frac{1}{4}$	$\frac{1}{2}$	$\frac{1}{3}$	$\frac{1}{3}$

The number of equal parts is the denominator of the fraction.

The numerator of each fraction is I.

A fraction where the numerator is I is called a **unit fraction**.

Unit fractions

1 Complete the sentences for each shape.

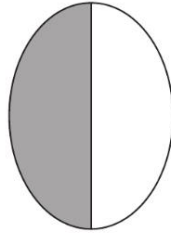a) There are ▢ equal parts.

There is ▢ part shaded.

$\frac{▢}{▢}$ is shaded.

b) There are ▢ equal parts.

There is ▢ part shaded.
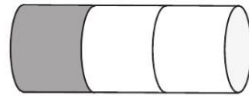
$\frac{▢}{▢}$ is shaded.

2 Tick the shapes that show $\frac{1}{3}$ shaded.
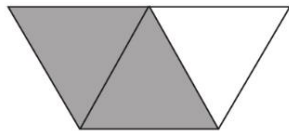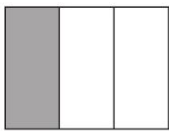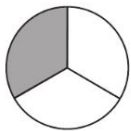
3 Circle the shapes that show a unit fraction shaded.

4 Shade $\frac{1}{3}$ of this shape.

5 Draw the rest of each shape from the unit fraction.

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

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

6 What is $\frac{1}{3}$ of 12?

$\frac{1}{3}$ of 12 = ▢

Understanding non-unit fractions

Discover

Lily   Noah   Ola

1 **a)** What fraction of the children are boys?
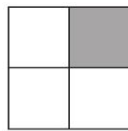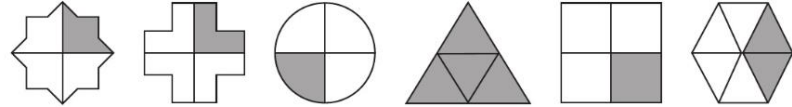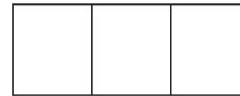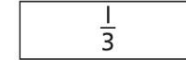What fraction of the children are girls?

b) Ola's kite is $\frac{3}{4}$ red.

Draw the kite.

Share

a)

There are **3** children.

The denominator is **3**.

1 of the children is a boy.

The numerator is **1**.

$\frac{1}{3}$ of the children are boys.

2 of the children are girls.

The numerator is **2**.

$\frac{2}{3}$ of the children are girls.

$\frac{1}{3}$ is a unit fraction because the numerator is 1. $\frac{2}{3}$ and $\frac{3}{4}$ are **non-unit fractions**. What do you notice about the numerators?

$\frac{2}{3}$ is read as two-thirds and $\frac{3}{4}$ is read as three-quarters.

b) $\frac{3}{4}$ of the kite is red.

The denominator is **4**.

So there are **4** equal parts.

The numerator is **3**.

So **3** parts are red.
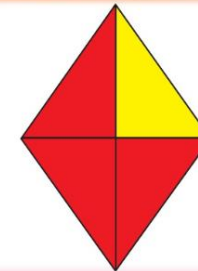
Understanding non-unit fractions

1 Complete the sentences.

There are ☐ equal parts.

The denominator is ☐.

☐ parts are shaded.

The numerator is ☐.

$\frac{\boxed{}}{\boxed{}}$ of the counters are shaded.

If the denominators are the same, are non-unit fractions always greater than unit fractions?

2 Match each shape to the fraction shaded.

$\frac{2}{4}$

$\frac{2}{3}$

$\frac{3}{4}$
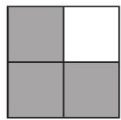
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3 a) Shade $\frac{2}{3}$ of the balloons.

b) Circle $\frac{2}{4}$ of the bottles.

4 a) Do you agree with Sam?

I see $\frac{1}{3}$.

Explain your answer.

_____

_____

b) What fractions can you see?

Explain how you know.

$\frac{\boxed{}}{\boxed{}}$ because _____

$\frac{\boxed{}}{\boxed{}}$ because _____

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Finding a half

Discover

Split into two teams.

1 **a)** Make two equal teams.

b) Another player joins. Can the teams still be equal?
Explain your answer.

Share

a) There are 12 players.

They need to be in two equal teams.
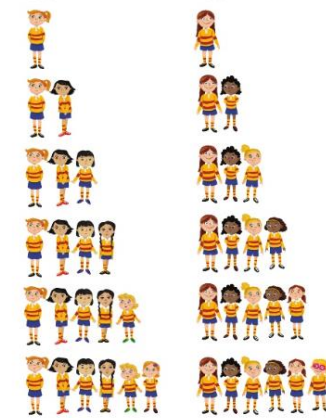
You can share the players one at a time.

There are 6 players in each team.

$\frac{1}{2}$ of 12 is 6.

Is that the same as $12 \div 2 = 6$?

Team A   Team B

b) 13 is an odd number.

Can I split an odd number into two equal parts?

The teams cannot be equal.

We need two more each time for the teams to be equal.

Finding a half

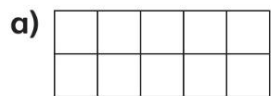**1** **a)** Complete the number sentences.
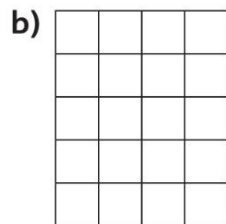
$\frac{1}{2}$ of 8 is ☐.

b)

$\frac{1}{2}$ of 12 is ☐.

2 Shade $\frac{1}{2}$ of each shape.

Complete the number sentence.

a)

$\frac{1}{2}$ of 10 is ☐.

b)

$\frac{1}{2}$ of 20 is ☐.

3 Circle one half of each amount.

Complete the number sentence.

a)

$\frac{☐}{☐}$ of 24 is ☐.

b)

$\frac{☐}{☐}$ of 18 is ☐.

4 Work out each fraction and match it to the answer.

$\frac{1}{2}$ of 28   15

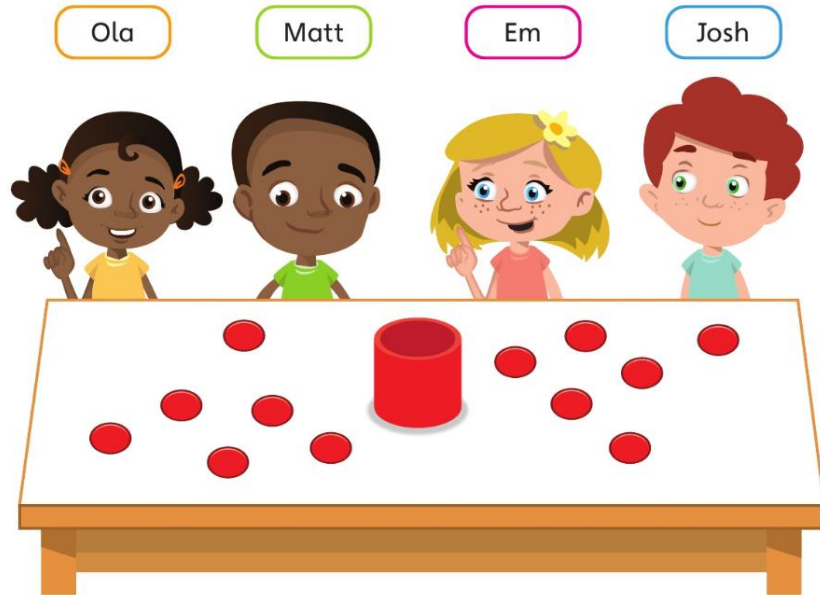$\frac{1}{2}$ of 22   13

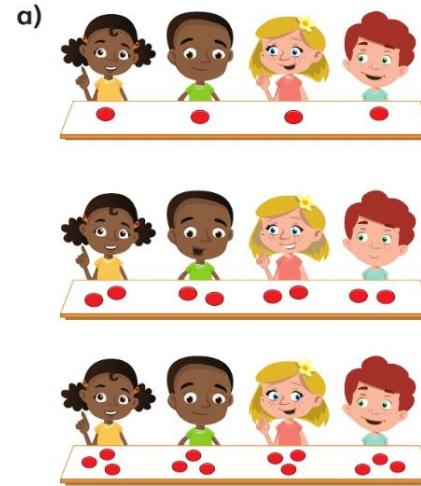$\frac{1}{2}$ of 30   14

$\frac{1}{2}$ of 26   11

Finding a quarter

Discover

Ola   Matt   Em   Josh

1 a) Can the counters be split into four equal groups?

b) How many counters will each child get?
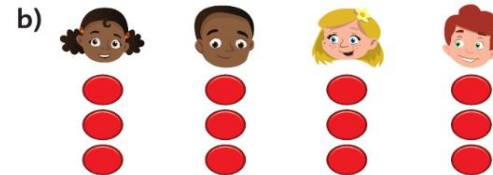
Share

a)

The counters can be split into four equal groups.

> I split the counters into equal groups by sharing. I gave the counters out one by one. Each child got the same number of counters.

b)
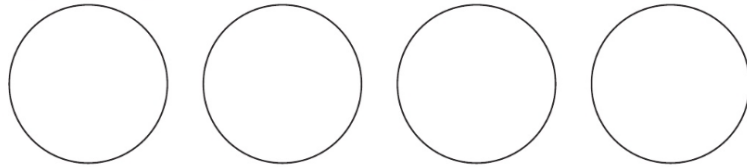

> Four equal groups is the same as quarters.

$\frac{1}{4}$ of 12 counters is three counters.

Each child will get three counters.

Finding a quarter

1 Share the counters equally into four groups.

$\frac{1}{4}$ of 8 = ☐

2 Sita has 20 flowers.

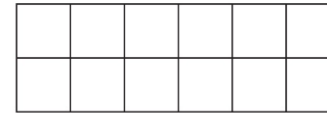She shares them between four vases equally.

How many flowers are in each vase?

> I can draw the flowers in the vases.

$\frac{1}{4}$ of ☐ = ☐

There are ☐ flowers in each vase.

3 **a)** Shade $\frac{1}{4}$ of the shape.   **b)** What is $\frac{1}{4}$ of 40?

$\frac{1}{4}$ of ☐ = ☐ $\frac{1}{4}$ of 40 = ☐

4 Kiki shares some sweets between four bags.

Complete the number sentence.

$\frac{☐}{☐}$ of ☐ is ☐ .

5 Half of a number is 6.
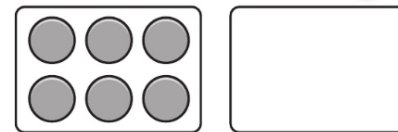
What is $\frac{1}{4}$ of the number?

$\frac{1}{4}$ of the number is ☐ .