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This tells you
which page
you need.



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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.



Lesson 1

Introducing whole and parts

Discover



- 1 a) Complete the sentences.
- The _____ is the **whole**.
- The _____ are the parts.
- b) How many parts are there?

world

continents

Share

a)

The world is the whole. The continents are the parts.

The world is the whole. Europe is a part.

The world is the whole and Africa is a part.

I can make lots of sentences using the words whole and parts.

b) There are seven continents, so there are seven parts.

I wonder if the parts are **equal**?

Lesson 1

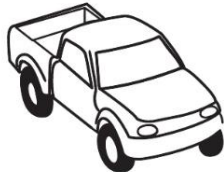
Introducing whole and parts

1 Match the part to the whole.



2 Complete the sentences about the truck.

Use some of the words in the list.



wheel truck
light bumper
window

The _____ is the whole.

The _____ is a part.

The _____ is the whole.

The _____ is a part.

3 Write two sentences about these images.




a) The _____ is the whole and the _____ is a part.

b) The flour is a _____ and the cake is the _____.

4 For each image, write two sentences about the whole and parts:

CHALLENGE

a)  _____

b)  _____

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.

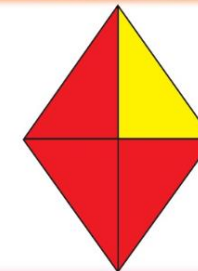
The numerator is **2**.
 $\frac{2}{3}$ of the children are girls.

- 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.

$\frac{1}{3}$ 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.



Understanding non-unit fractions

1 Complete the sentences.

There are equal parts.

The denominator is .

parts are shaded.

The numerator is .

of the counters are shaded.



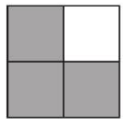
If the denominators are the same, are non-unit fractions always greater than unit fractions?



2 Match each shape to the fraction shaded.



$\frac{2}{4}$



$\frac{2}{3}$



$\frac{3}{4}$

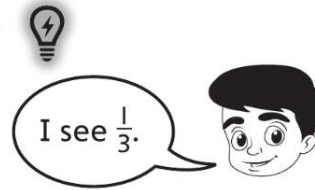
3 a) Shade $\frac{2}{3}$ of the balloons.



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



4 a) Do you agree with Sam?



Explain your answer.

b) What fractions can you see?

Explain how you know.

because _____

because _____

Unit and non-unit fractions

Discover



Amelia

Max

Isla

Zac

1 a) What fraction of the children are wearing glasses?

b) Max's kite is $\frac{1}{2}$ red and $\frac{1}{4}$ yellow.

What shape is the kite that Max is flying?

Share



There are 4 children in total. The denominator is 4.

1 of the 4 children is wearing glasses. The numerator is 1.

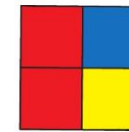
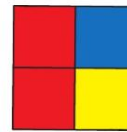
$\frac{1}{4}$ of the children are wearing glasses.

b)

I will start by working out which of the kites are $\frac{1}{2}$ red.



Then I will work out which of these kites are also $\frac{1}{4}$ yellow.



Both of these shapes are $\frac{1}{2}$ red.

$\frac{1}{4}$ of the square is yellow.

$\frac{1}{2}$ of the triangle is yellow.

The square is $\frac{1}{2}$ red and $\frac{1}{4}$ yellow.

Max is flying the kite that is shaped like a square.



The triangle is split into 2 equal parts (denominator). 1 of the parts is red (numerator). We say $\frac{1}{2}$ is red.

Lesson 3

Unit and non-unit fractions

1 Complete the sentences.



There are birds altogether.

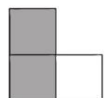
The denominator is .

birds are flying to the right.

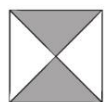
The numerator is .

of the birds are flying to the right.

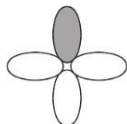
2 Match each shape to the fraction that shows how much of the shape is shaded.



$\frac{1}{4}$



$\frac{2}{3}$



$\frac{1}{2}$

3 Complete the sentences.



$\frac{1}{5}$ of the cars are _____.

have numbers on the roof.

are _____.

4 a) Divide the bar into 2 equal parts. Shade in $\frac{1}{2}$.



b) Divide the bar into 3 equal parts. Shade in $\frac{1}{3}$.



c) Use your answers to a) and b) to help complete the following expressions. Use the <, = or > sign for each expression.

$\frac{1}{2}$ ○ $\frac{1}{3}$

$\frac{1}{3}$ ○ $\frac{1}{2}$

Tenths

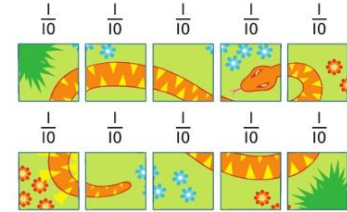
Discover



- 1 a) What fraction of the whole jigsaw is 1 piece?
- b) Danny removes 2 pieces of the jigsaw. What fraction does he remove?
Is the answer the same no matter which pieces he removes?

Share

- a) The jigsaw is split into 10 equal parts.

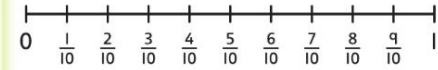


The denominator is 10.

One jigsaw piece is 1 part of the whole jigsaw.

The numerator is 1.

This number line goes up in $\frac{1}{10}$ s.

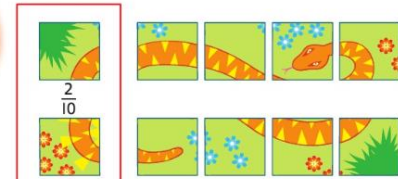


1 piece is $\frac{1}{10}$ of the whole.

$\frac{1}{10}$ is written as **one-tenth**.

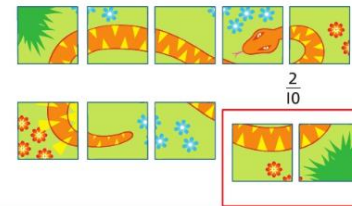
- b) Danny removes 2 of the 10 pieces. This is $\frac{2}{10}$ or two-tenths of the whole.

There is more than one way to find $\frac{2}{10}$ of the whole.



All of the pieces of the jigsaw are the same size, so each piece is $\frac{1}{10}$ of the whole.

Taking any 2 pieces of the jigsaw will represent $\frac{2}{10}$ or two-tenths of the whole.



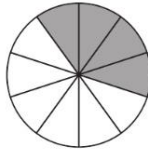
So, the answer is the same no matter which 2 pieces Danny removes.

Lesson 4

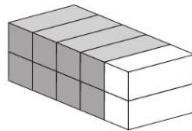
Tenths

1 What fraction of each shape is shaded?

a) $\frac{\square}{10}$ of the circle is shaded.



b) $\frac{\square}{10}$ of the cuboid is shaded.



c) $\frac{\square}{\square}$ of the smiley faces are shaded.

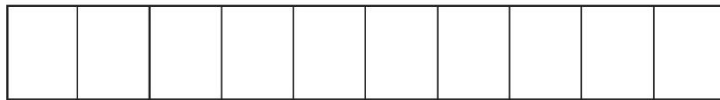


2 Colour the correct fractions.

a) Colour $\frac{4}{10}$ of the triangles.



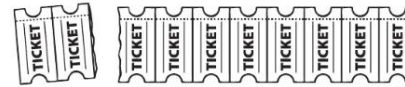
b) Colour $\frac{7}{10}$ of the rectangle.



c) Colour the circles. Leave $\frac{2}{10}$ of the circles white.

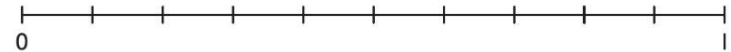


3 2 tickets have been taken off a strip of 10 tickets.



a) What fraction of the 10 tickets are left? $\frac{\square}{\square}$ are left.

b) Use the number line to show the fraction of tickets that have been taken off and the fraction of tickets that are left.



4 Complete the calculations. Show each one on a number line.

a) $1 = \frac{1}{10} + \frac{\square}{\square}$

b) $\frac{\square}{\square} + \frac{3}{10} = \frac{10}{10}$

5 Richard and Jamilla are both counting in tenths.

Richard starts at 0 and counts up. Jamilla starts at 1 and counts down.

If they both count at the same speed will they ever say the same fraction at the same time?

Explain your answer.
