Year 2 Maths – Week Beginning 6th July

Don't forget to continue with **Numbots** and **MyMaths** tasks too.

This week we are going to be thinking about different types of **measurement** – length and height, mass, capacity and time. You have got lots of different activities to choose from to practise your measuring skills!!

Lesson 1: Length and Height

You will need a ruler and possibly a tape measure.

Starter – Measuring with a ruler

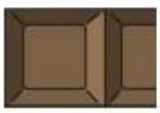
What measurement do we use to find out the length or height of something? - centimetres (cm) or metres (m).

When might you use a ruler? What else could you use?

Get your brains warmed up today with a yummy chocolate measuring activity! Use a ruler to measure the length of each chocolate bar – to the nearest centimetre (cm).

A  _____cm

B  _____cm

C  _____cm

Can you put the chocolate bars in order from shortest to longest? _____

Measuring length and height in cm, using a ruler.

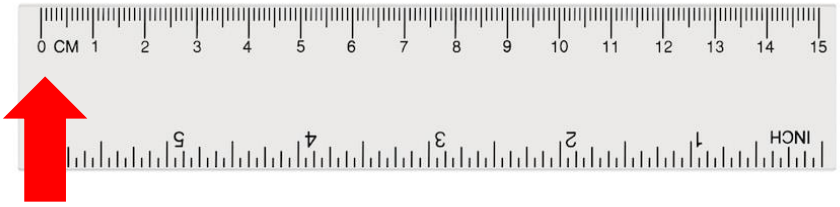
Remember:

When you are measuring **length**, you are measuring how **long** something is.

When you are measuring **height**, you are measuring how **tall** something is.

Where do you need to start measuring from?

Top Tip: Always measure from 0 – not the end of the ruler.



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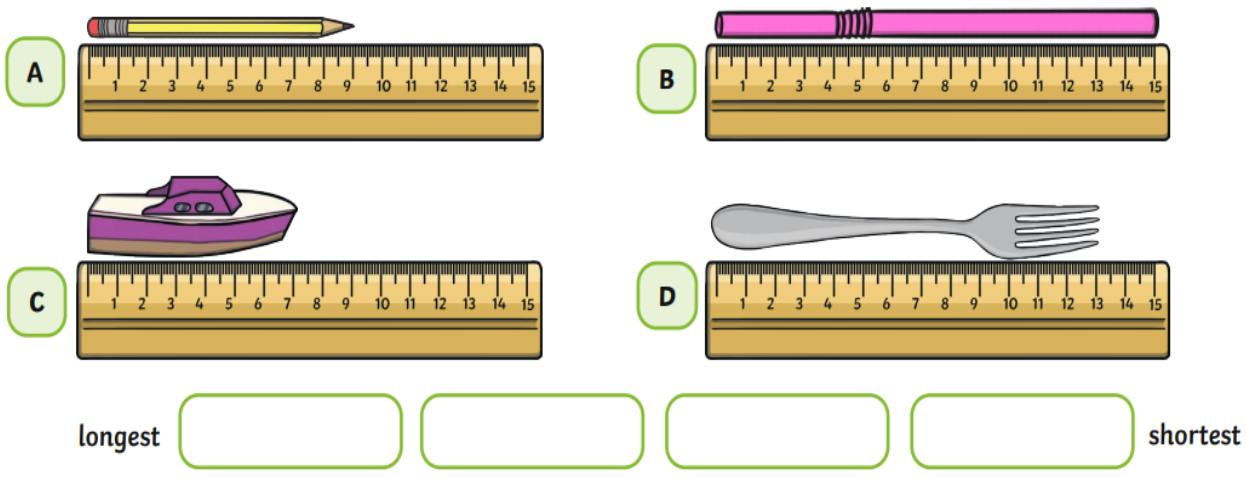
Task 1:

Choose a variety of objects and practise measuring them with a ruler or tape measure e.g. glass, pencil, book, teaspoon, pen etc.
How long are your objects, to the nearest centimetre (cm)? Record your results.
How tall are your objects, to the nearest cm? Record your results.

Can you order your objects from longest to shortest?
Can you order your objects from shortest to tallest?

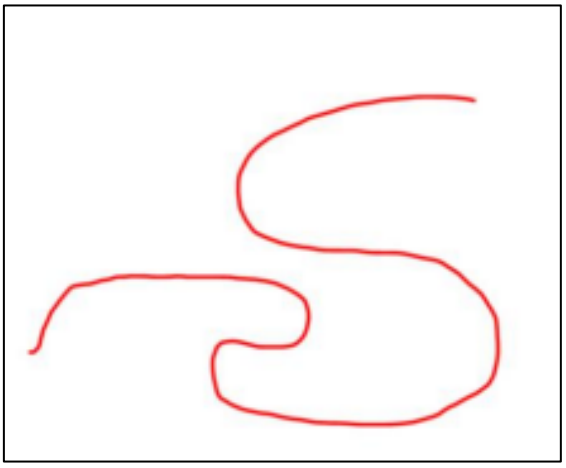
Challenge:



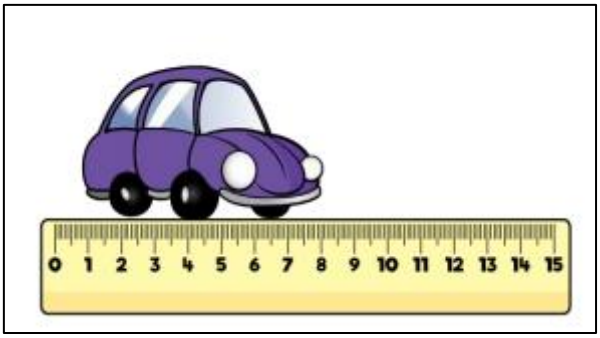
Task 2: Problem-Solving Length and Height

1. Draw a line that is……. 5 cm long
   8 cm long
   Longer than 4cm but shorter than 7 cm

2. How long is this piece of string? How could you find out?

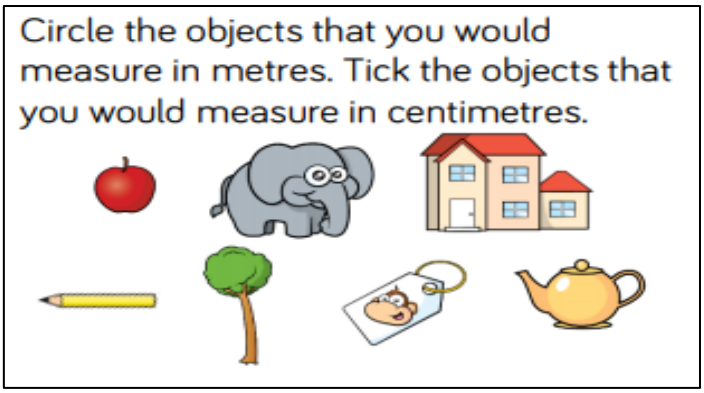


3. Mo says that the car measures 8 cm long. Do you agree? Explain your answer.



Measuring in metres (m)

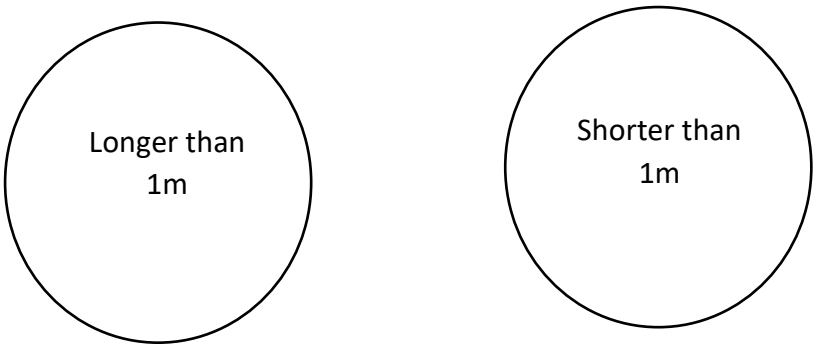
Which is bigger - metres (m) or centimetres (cm)? Why might you need to measure in metres rather than cm?



Why is it better to measure in metres for longer distances or objects?

Task 3:

Collect some objects at home and sort into two groups:



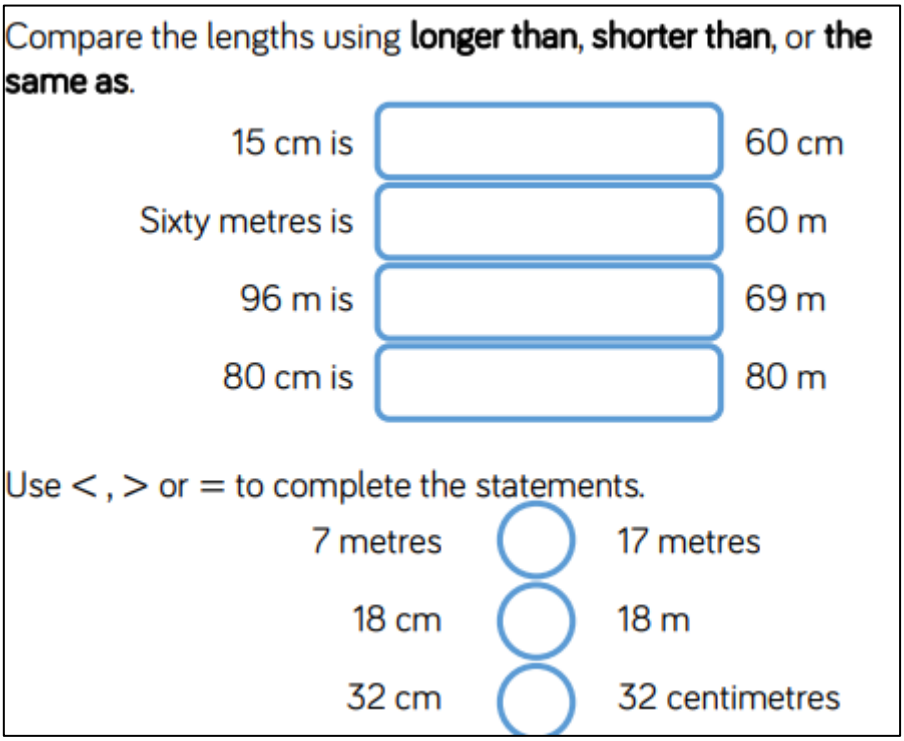
Can you find anything that is exactly 1m?

Task 4: Estimating

Would you need to use a ruler to measure the length of your kitchen (or another room in your house)? What would you use to measure a person's height?

Estimate how tall you think you are and then measure to see exactly! Compare yourself to other members of your family. Can you order them by height?

Challenge Questions



Lesson 2: Mass

Starter – Length Problem-Solving

Use your knowledge of fractions from last week to work out this length problem. Joe used cubes to make a rod that was 4 cubes long.

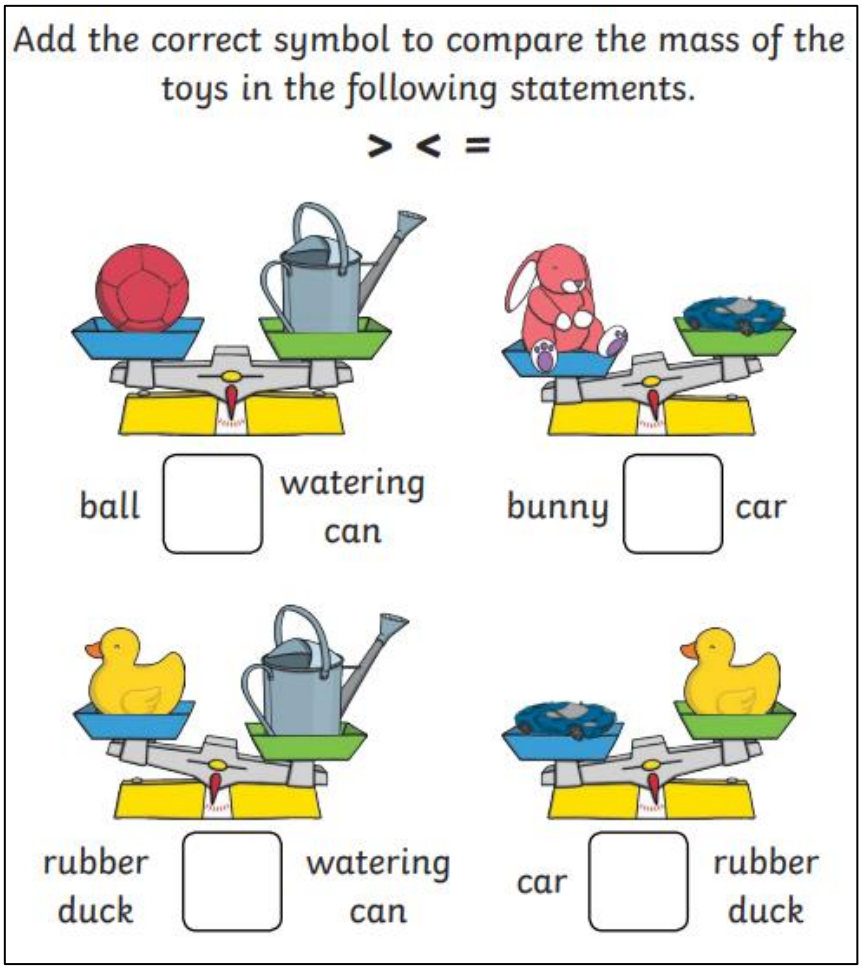
How many cubes did he need to make a rod twice the length of that one?
How many cubes did he need to make one three times the length?
How many cubes did he need to make one four times the length?
How many cubes did he need to make a rod half the length of his first one?
How many cubes did he need to make a rod a quarter of the length of his first one?

Mass

What does mass mean? What are we measuring? We are finding out the weight of something. What do we need to use to measure mass/weight? Do you have anything at home that measures weight? Can you think of 5 different things that need to be weighed?

Task 1: Balance Scales

What happens to balance scales when the object is heavier / lighter?



Challenge Question: Which is the lightest out of all the objects?

<u>Task 2</u>: Reading weighing scales in grams

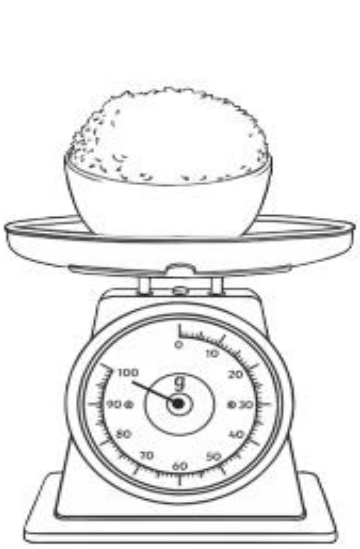
When we measure the weight or mass of something, we measure it in grams. This is written 'g.' e.g. two grams = 2 g

Use your knowledge of counting in 2s, 5s and 10s to read the scales and find out how heavy the objects are.

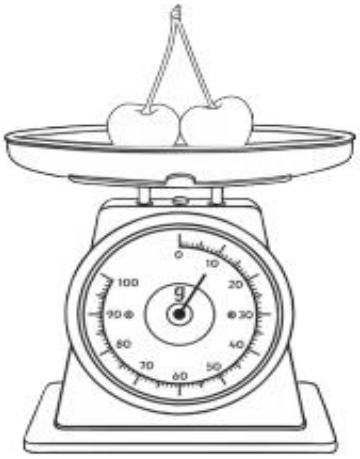
1. Use gram weights to measure the mass of objects using a balance scale.

The _____ weighs _____ grams.

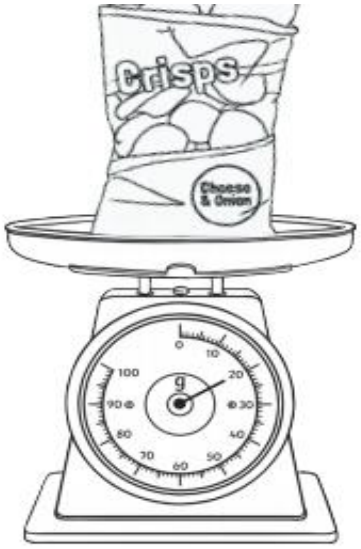
2.



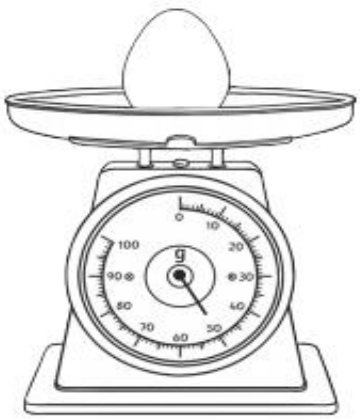
_____ g



_____ g



_____ g



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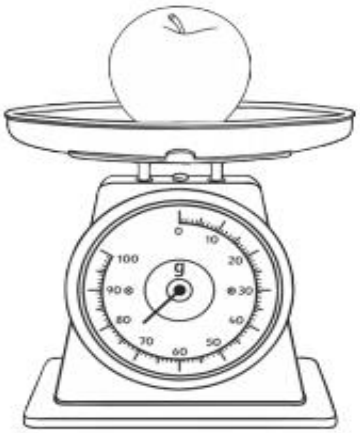


_____ g

_____ g

Task 3: Kilograms

We can also use kilograms to weigh heavier objects:

1 kilogram is the same as / is equal to 1000 g

1 kg = 1000 g

1. Find the mass of the sweets and the beans.

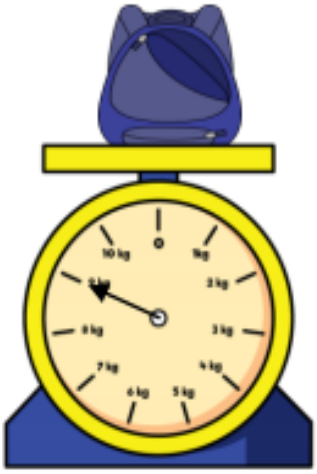
The sweets weigh ____kg

The beans weigh ____g.

2. Read the scales to find the mass of each.

The bag weighs ____ kg.

The person weighs ____ kg.



3. Sophie's family are going on holiday. Compare the mass of their suitcases.

Sophie's suitcase is _____ than Dad's suitcase

Mum's suitcase weighs ____ kg more than Dad's suitcase.

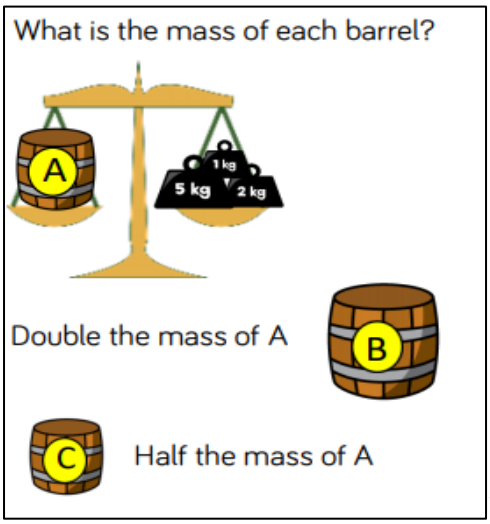
Task 4: Comparing Mass

> greater than < less than = equal to/same as

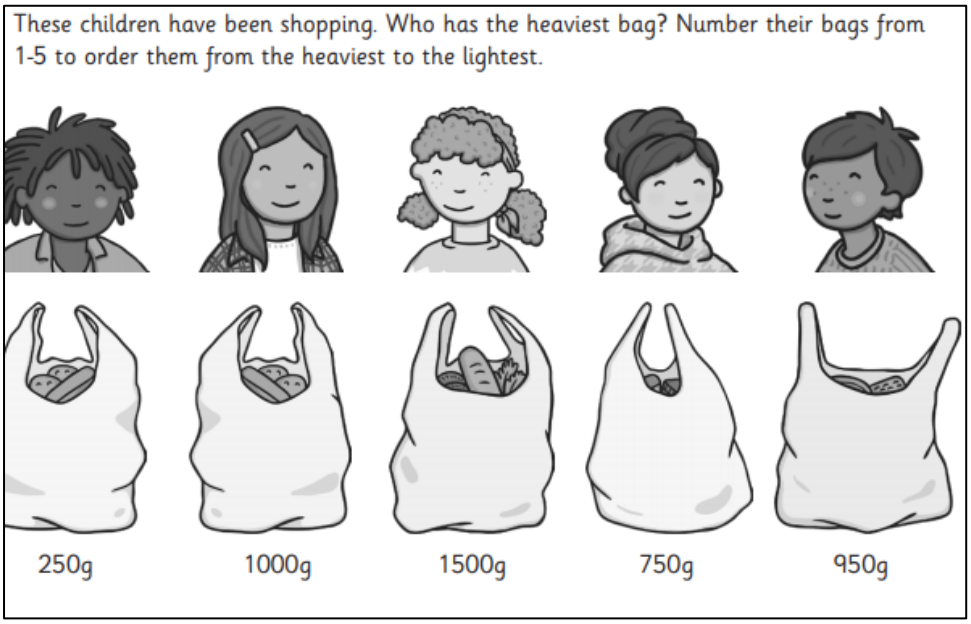
Fill in the missing symbols to complete these statements:

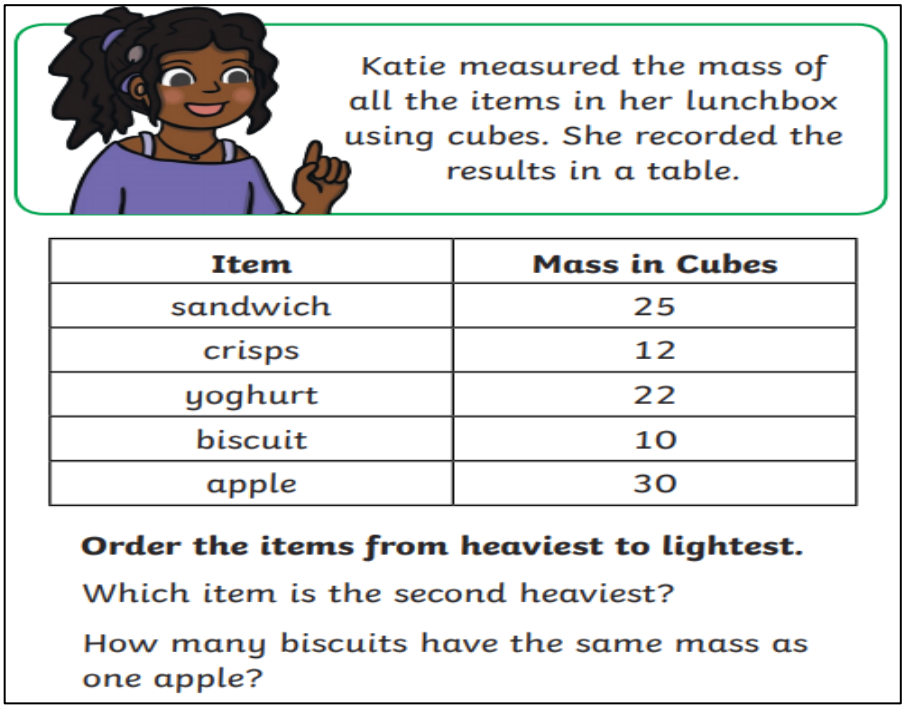
1 kg _____ 1000 g	1 kg _____ 60 g	40 g _____ 50 g
6 kg _____ 600 g	3 kg _____ 30 kg	7 g _____ 7 kg

<u>Challenge Questions</u> – Problem-Solving and Reasoning



What is the difference between the mass of B and C?





Can you think of a question to ask using this information?

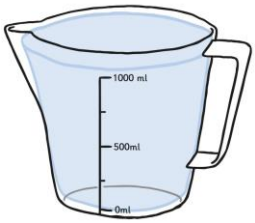
Lesson 3: Capacity

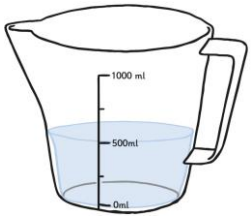
Capacity is the amount of liquid that a container ***can hold***.

Volume is the amount of liquid that a container ***is actually holding***.

Starter:

Can you label these three measuring jugs? What language do we use to describe the capacity of containers (full, empty or half full/half empty)?





_____ _____ _____

Task 1: Estimating Capacity

1. Find three different containers at home. Which do you think has the largest capacity? Can you estimate the order from largest capacity to smallest capacity?
2. Compare the capacity of your containers, using water or rice. Were you correct?

Challenge:

1. Choose a selection of see through containers (glass or plastic etc.)
2. Can you fill your containers so that they are full, half full, ¼ full and ¾ full – use your eyes to measure out what you think is the correct amount. Can you explain what you are doing?

Task 2: Measuring capacity using millilitres (ml)

The standard unit of **ml** is used to measure capacity.
Do you have a measuring jug at home? Can you see the ml written on the side?

- How many ml do you think your different containers will hold?
- Estimate how many ml each container will hold and record on paper.
- Measure the capacity of your containers and record the results.
- Were your estimates close to the actual capacity?
- Can you order the results from smallest to greatest capacity?

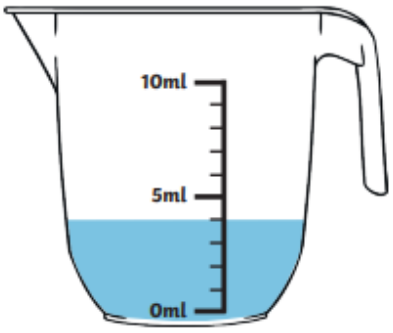
Challenge:

See if you can create a $>$ greater than $<$ less than $=$ equal to/same as statement for your containers.

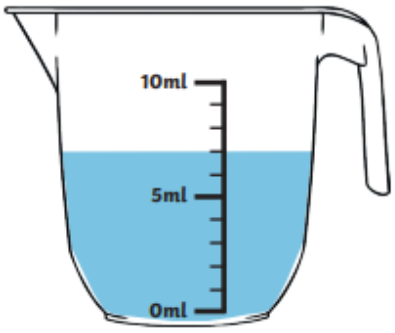
For example: glass (30 ml) $<$ mixing bowl (65 ml)

Task 3: Measuring Volume

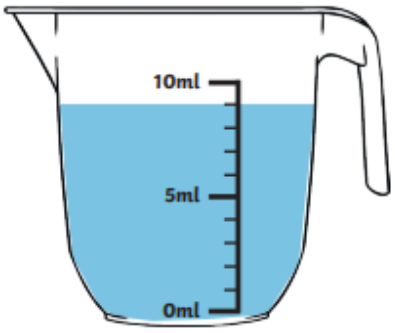
How much water do the jugs contain?



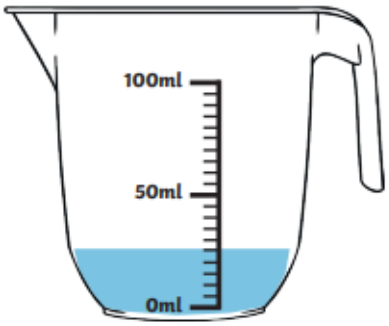
1. _____ ml



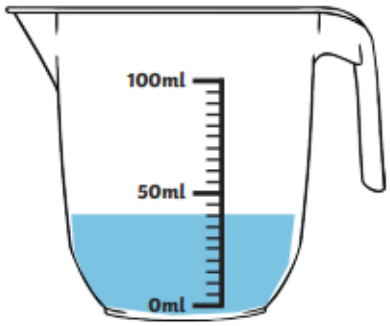
2. _____ ml



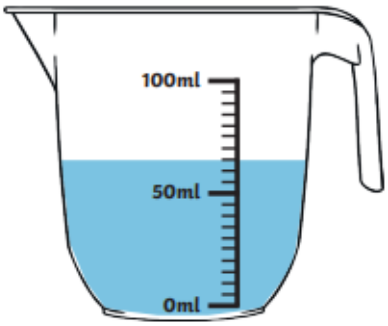
3. _____ ml



4. _____ ml

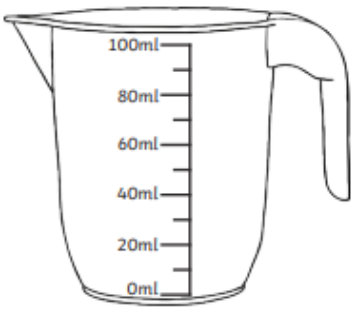


5. _____ ml

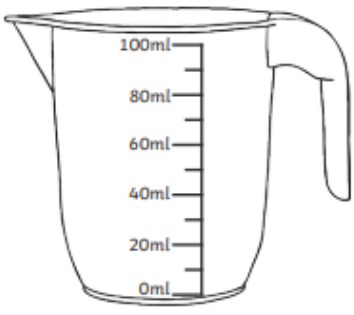


6. _____ ml

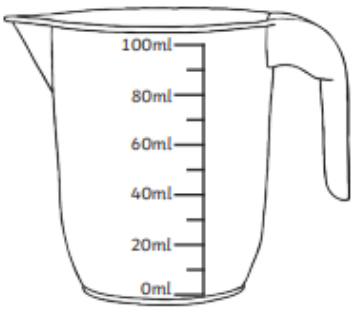
Colour in the correct volume of water:



90ml



50ml



30ml

Measuring capacity in litres

We can also use litres to measure the capacity of larger containers:

1 litre is the same as / is equal to 1000 ml.

1 l = 1000 ml

Measure out 1 litre of water – is it more than you thought?

Interesting fact! …..Children between 4-8 years old should drink around 1 litre of fluid a day (6-8 glasses) according to the European Food Safety Authority.

Task 4:

1. Can you find any containers at home that hold more than one litre?
2. Sort them into groups – more than 1l and less than 1l. I wonder if you find any that hold exactly 1 litre?

Challenge:

Have a look on containers of food or drink at home – can you find the label that shows its capacity?

This bottle of tomato ketchup has a capacity of **500 ml**.

This bottle of clothes washing liquid has a capacity of **1.5 litres**.

This bottle of fruit squash has a capacity of **1 litre**.

Problem-Solving:

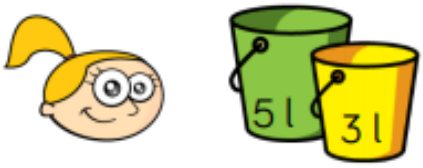
Mo puts 4 litres of water in bucket A.
He then pours 3 litres from bucket A into bucket B.

Which sentence is correct?

- There is more in bucket A.
- There is less in bucket A.
- There are equal amounts in each bucket.

Explain why.

Eva wants to measure 2 litres of water into a tub. She only has a 5 litre and a 3 litre container.



How can she use both containers to measure 2 litres?

Lesson 4: Time

We are going to be comparing and sequencing intervals of time as well as telling and writing the time over the rest of the sessions this week.

Starter:

Put these intervals of time in order from shortest to longest.

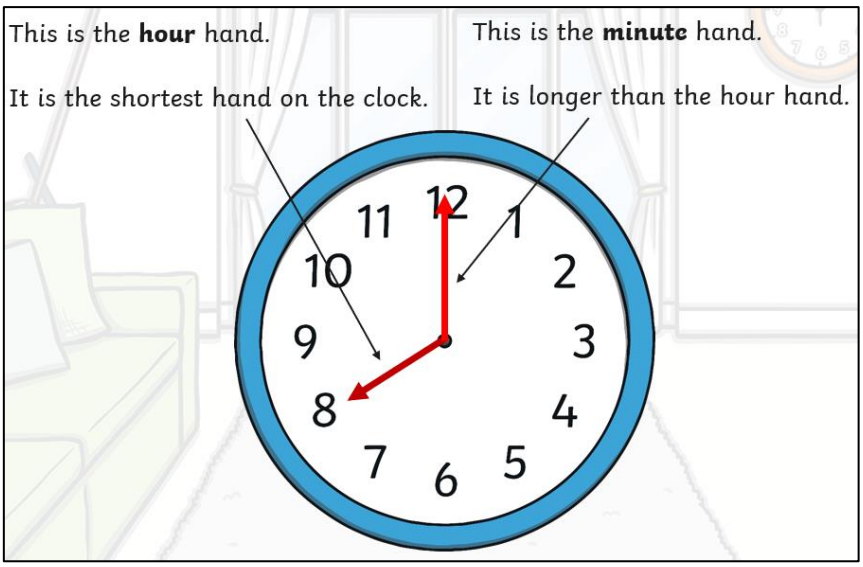
weeks	hours	minutes	years	seconds	months

Talk about each of these intervals of time. Can you explain your order?

How many seconds are there in 1 minute?

How many minutes in 1 hour?

Telling the Time



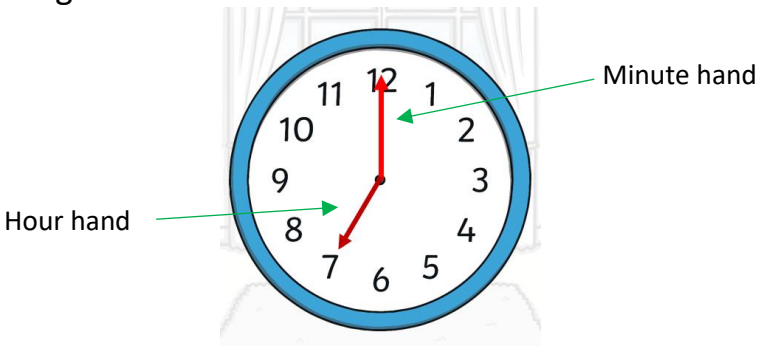
Top Tip: Do you remember at school we learnt an easy way to remember each hand?

The hour hand is the short hand (and the shortest word).

The minute hand is the long hand (and the longest word).

<u>Task 1</u>: O' Clock

When we read an o'clock time, the minute hand always points to the 12 and the hour hand tells us the hour e.g. 7 o'clock.



Can you read and write o'clock times?

_____ o'clock

_____ o'clock

_____ o'clock

_____ o'clock

3 o'clock

8 o'clock

12 o'clock

7 o'clock

<u>Challenge:</u>

Write the time that is one hour before the time shown on the clock.

_____

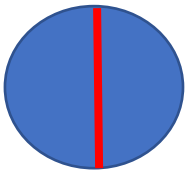
_____

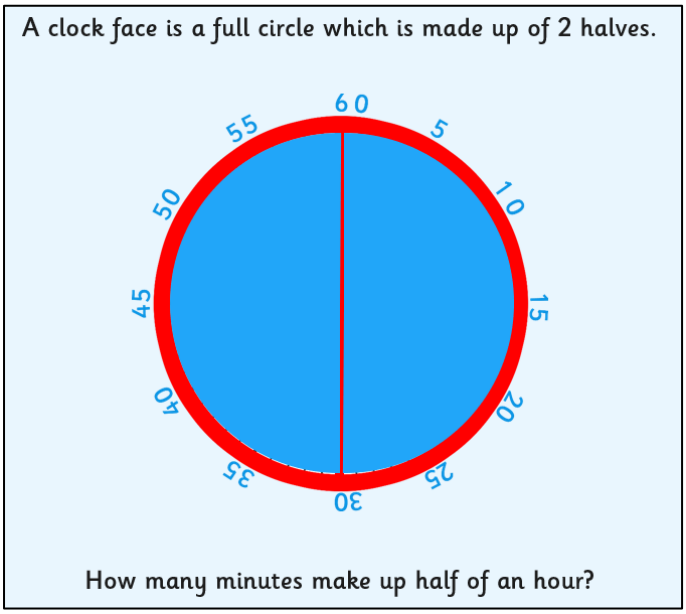
_____

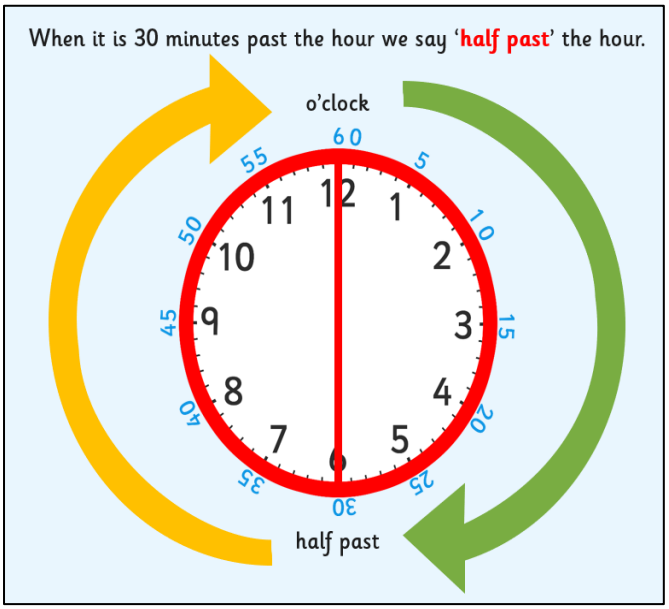
_____

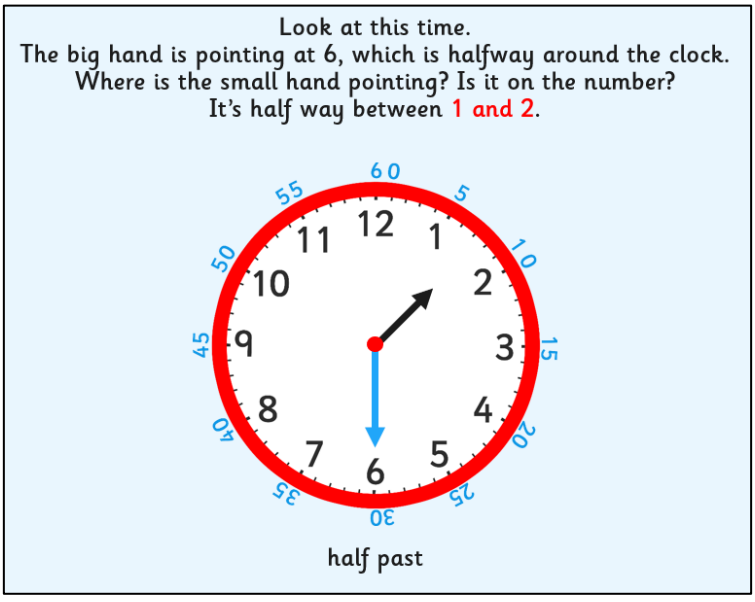
<u>Task 2</u>: Half Past

It will help to think about your fraction knowledge when you are learning half past.
How many sections is a circle split into when it is cut in half?







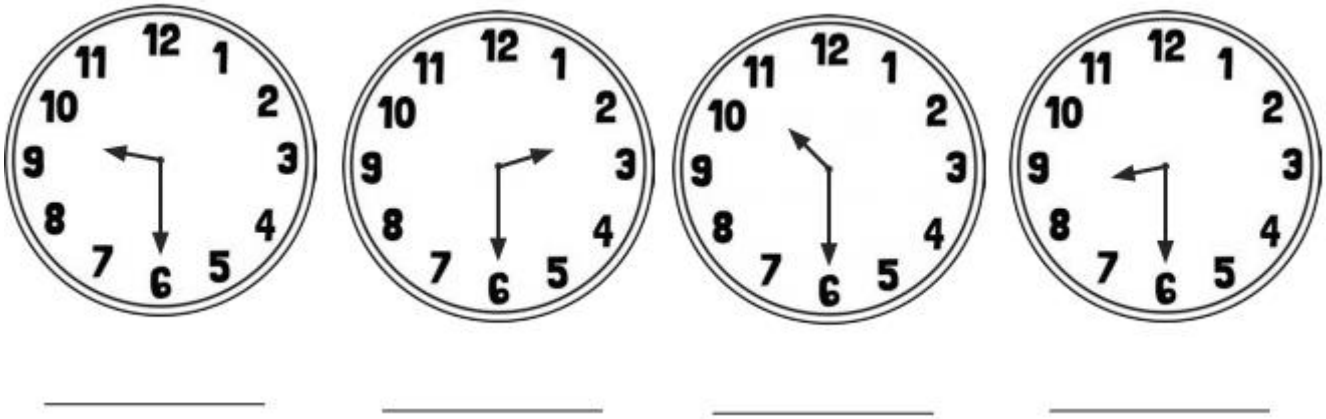


What is the time?

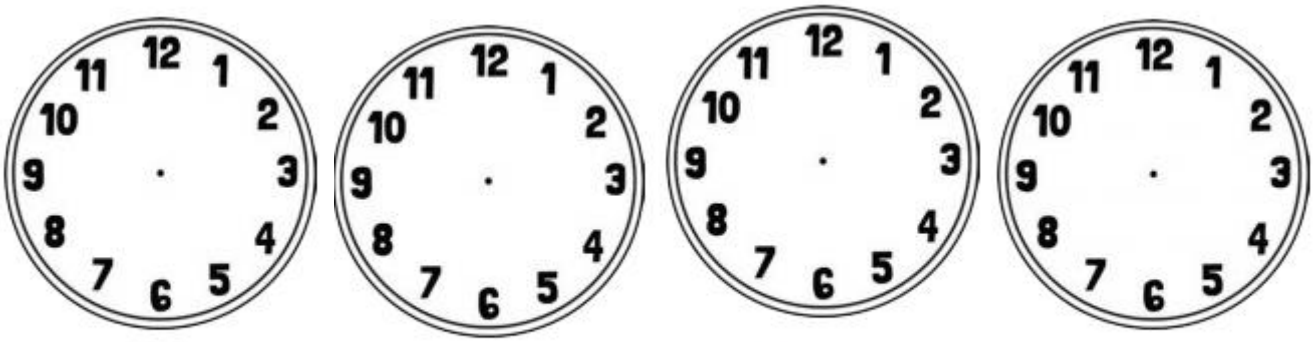
_____

When we <u>read</u> a half past time, we look at the number that the short, hour hand has **just gone past**.
When we <u>write</u> a half past time, the minute hand always points to the 6 (to show half past) and the short, hour hand is **just past** the hour (halfway between two numbers).

Can you read and write half past times?



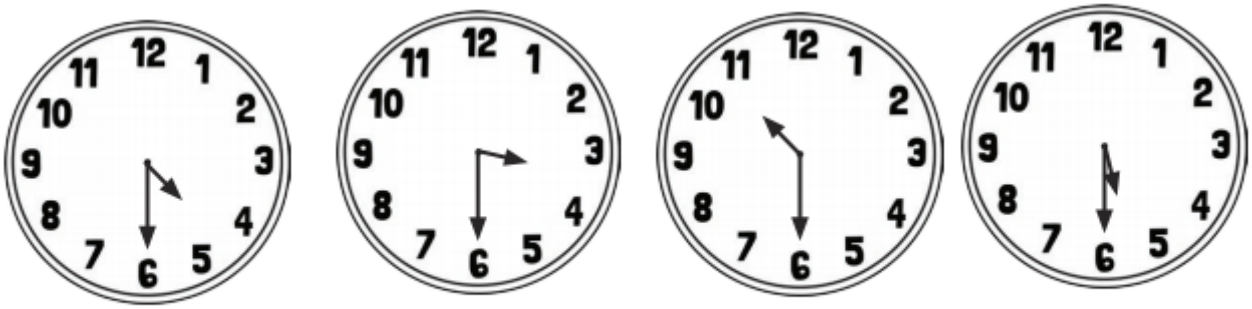
_____ _____ _____ _____



half past 3 half past 7 half past 12 half past 4

Challenge:

Write the time that is one hour after the time shown on the clock.



_____ _____ _____ _____

Task 3: Nature Clock

Make your own clock outside to practise telling the time. Can you move the stick hands to make a time? Practice o'clock and half past.

Lesson 5:

Starter:

Can you put these lengths of time into order from shortest to longest?

6 seconds 6 years 6 months 6 minutes 6 hours 6 days

How many hours in 1 day? _____

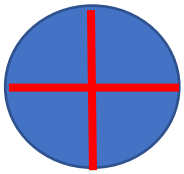
How many days in a week? _____

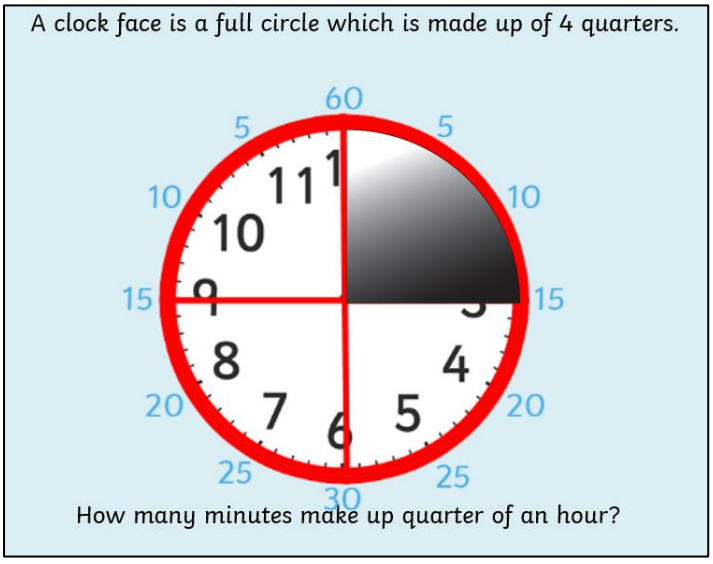
How many months in a year? _____

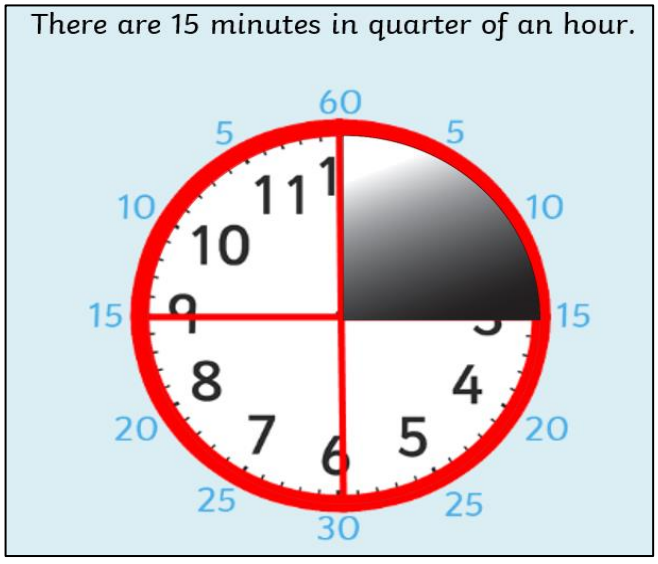
Quarter Past and Quarter To

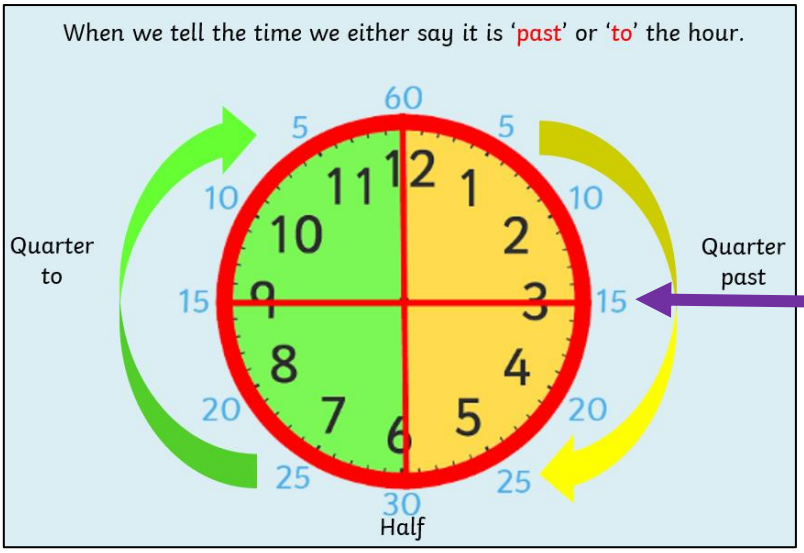
We are going to have a look at quarter to and quarter past times today and then carry on with this learning next week. It will help to think about your quarters fraction knowledge when you are learning quarter to and quarter past.

How many sections is a circle split into when it is cut in quarters? It has 4 parts, each is called a quarter.







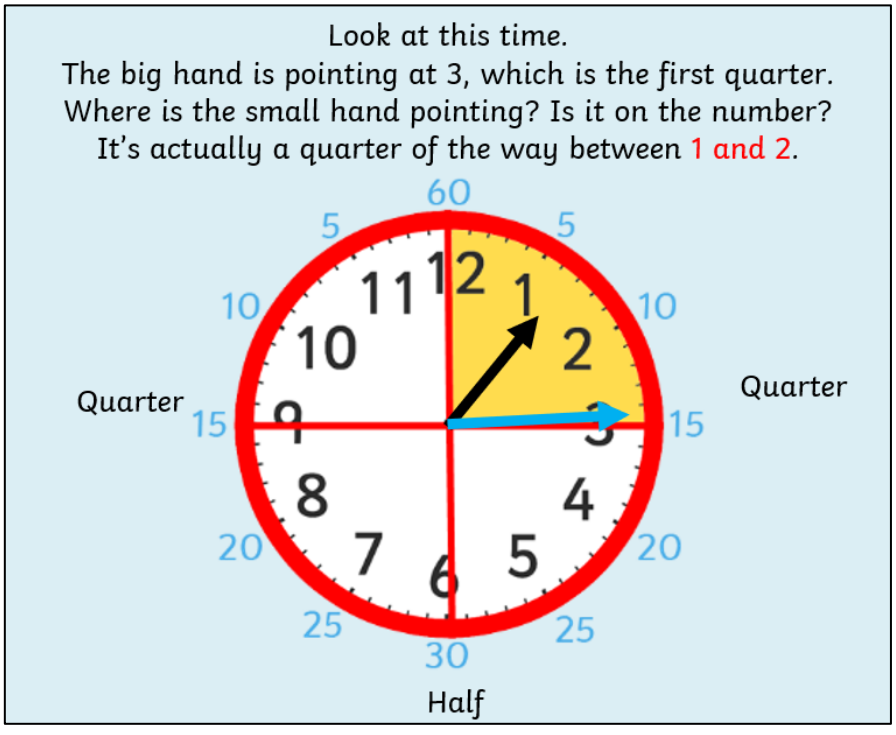


When the long, minute hand is pointing to the **3**, it is **quarter past.**

We are going to look at quarter past times first (yellow).

Top Tip:

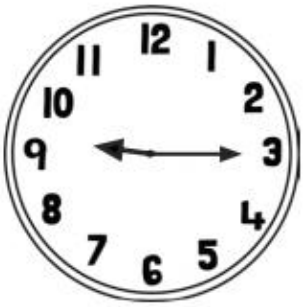
A good way to remember **quarter** past is that the minute hand has **gone** past **the o'clock time (12)** and moved a **quarter** of the way round the clock face.



What is the time? Quarter past_____

<u>Task 1</u>: Quarter Past

Can you read and write these quarter past times?







quarter past 9

quarter past 3

quarter past 5

quarter past 1

quarter past 7

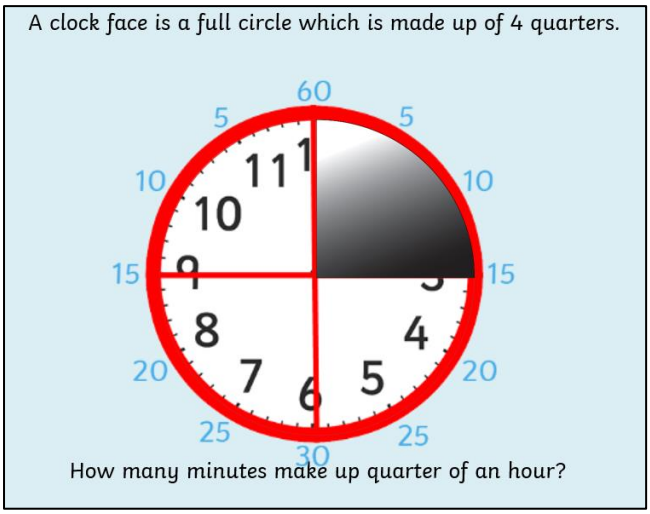
quarter past 8

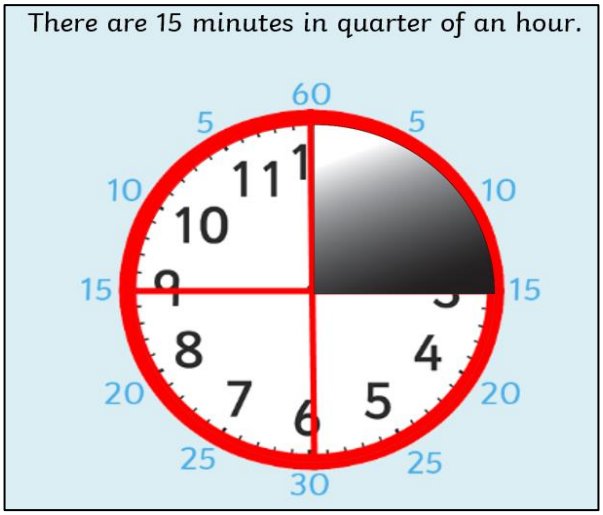
quarter past 10

quarter past 12

Quarter To

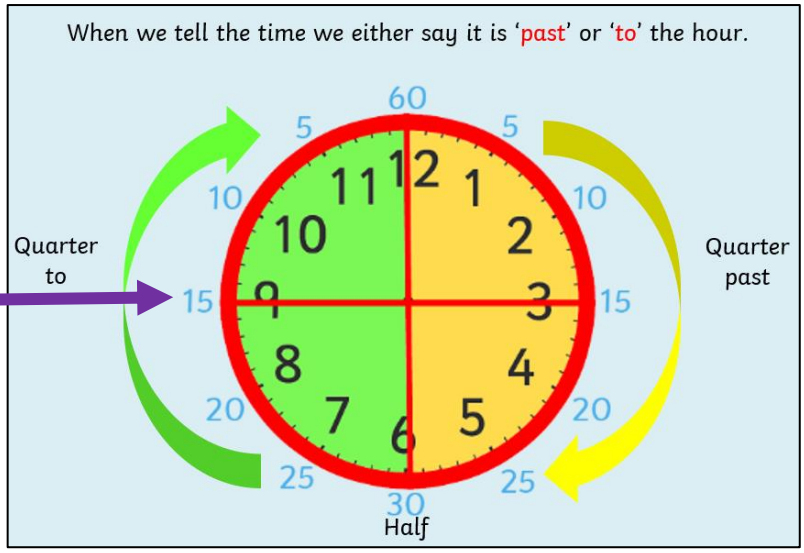
Have a look again at the clock faces and how they are divided into 4 quarters.





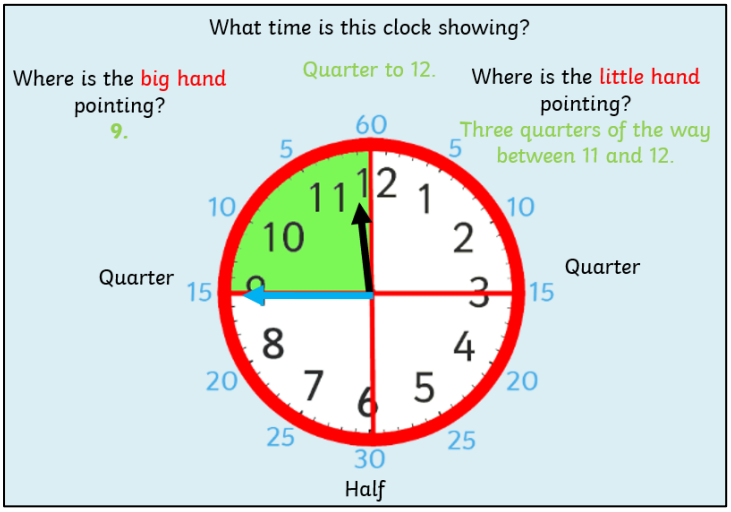
We are going to look at ***quarter to*** times next (green).

When the long, minute hand is pointing to the **9**, it is **quarter to.**



Top Tip:

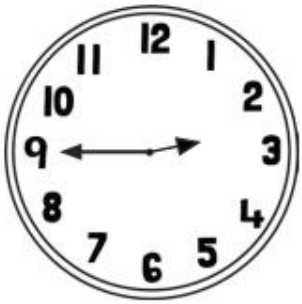
A good way to remember **quarter** to is that the minute hand is on its way **back** towards **the o'clock time (12)** and has a **quarter** of a turn left to get back **to** the hour.



What is the time? Quarter to _____

<u>Task 2</u>: Quarter To

Can you read and write quarter to times?





quarter to 11


quarter to 4


quarter to 6


quarter to 2


quarter to 8


quarter to 5


quarter to 12


quarter to 1

<u>Task 3:</u> Time Dominoes

For a bit of extra practise at recognising all the times we have learnt so far, have a go at the time dominoes game (attached document).

Print and cut out the cards and match the clocks and times together.