

Our Maths Learning Journey

Key vocabulary:

Half
Quarter
Third
Equivalent
Equal part
Numerator
Denominator
Fraction
Unit fraction
Non-unit fraction

Volume

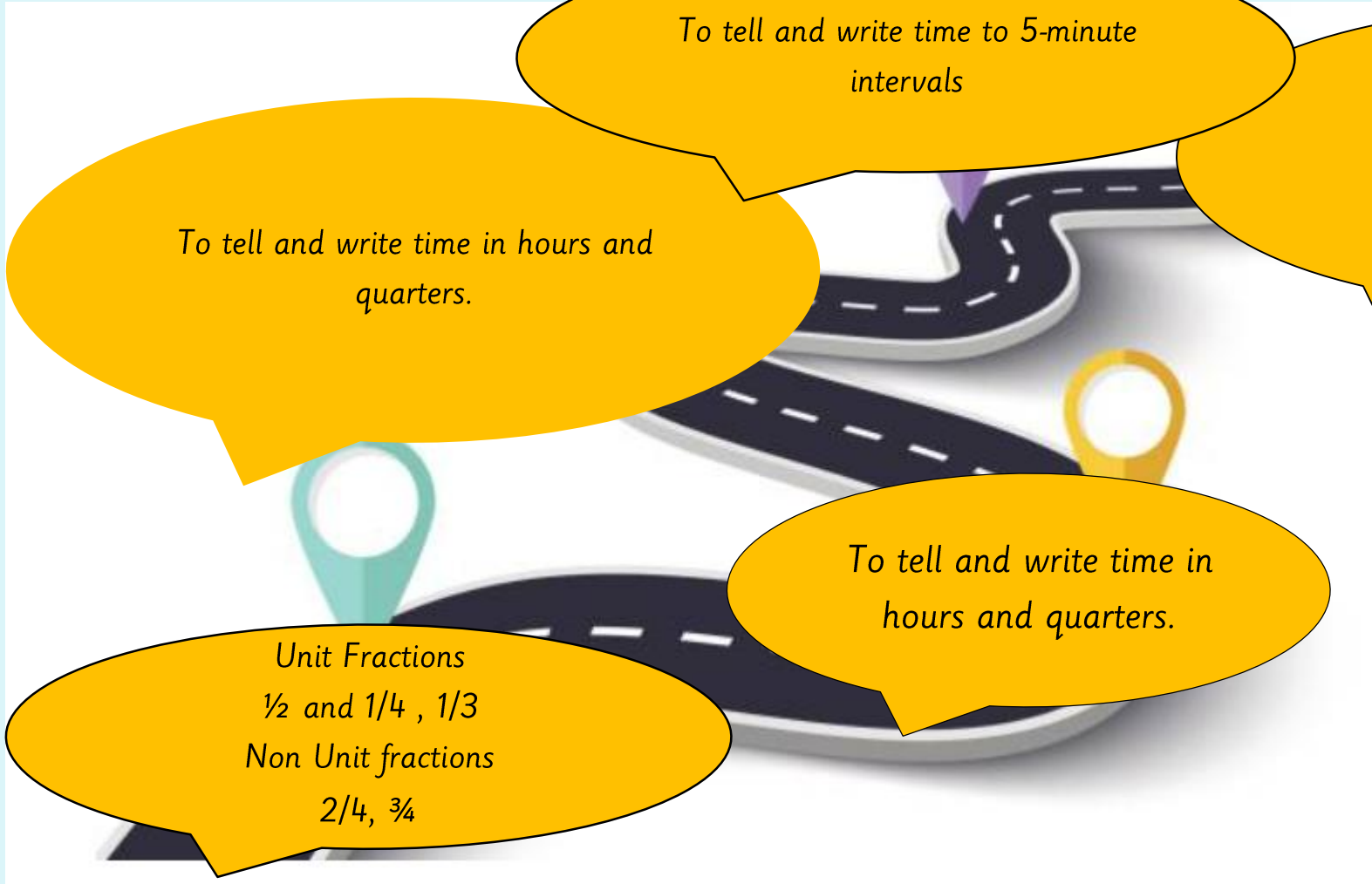
To tell and write time to 5-minute intervals

Sats papers

To tell and write time in hours and quarters.

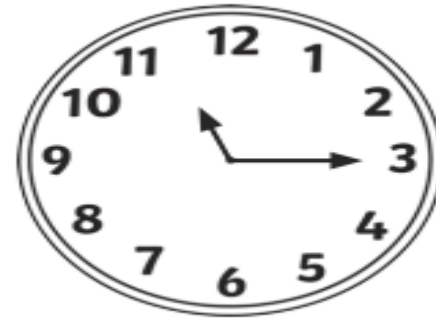
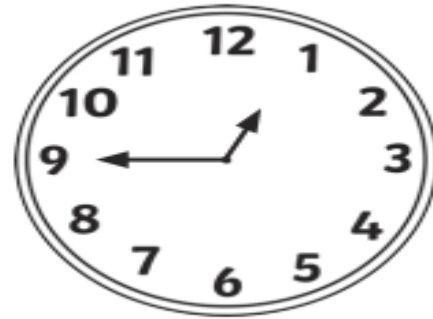
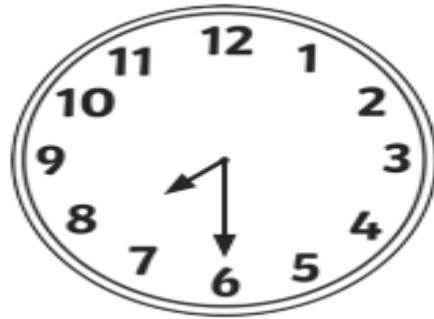
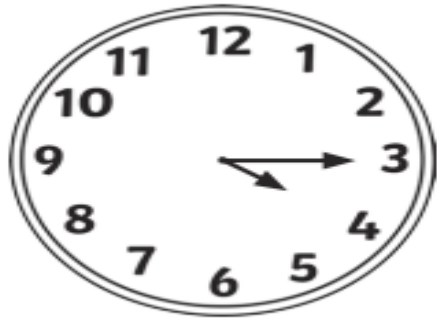
To tell and write time in hours and quarters.

Unit Fractions
 $\frac{1}{2}$ and $\frac{1}{4}$, $\frac{1}{3}$
Non Unit fractions
 $\frac{2}{4}$, $\frac{3}{4}$



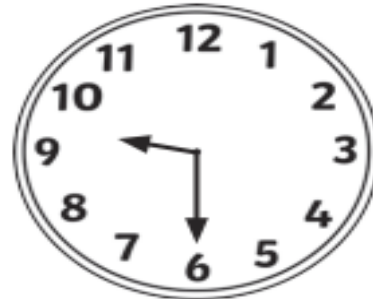
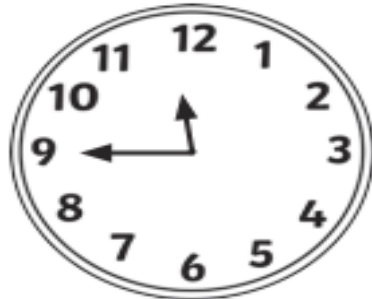
- *challenge*

Write the time shown on each clock.



Challenge:

Write the digital time that is **half an hour after** the time shown on each analogue clock.





13.05.2024

LQ: Can I measure volume in millilitres?

Steps to Success:

I can identify tools that help me measure volume.

I can measure the volume in standard units (millilitres).



★ STAR WORDS ★



volume

capacity



litres

millilitres



measure

scale



compare



13.05.2024

LQ: Can I measure volume in millilitres?



Today you are going to recap about volume and capacity.

Volume is the amount of space a 3D shape takes up. Capacity is the amount a shape or container can hold. We measure capacity in millilitres (ml) or litres (L).

Volume is how much a container can hold in total.



Capacity is how much is filled up. There is 60ml of water in this container.

1000 millilitres = 1 litre

13.05.2024

LQ: Can I measure volume in millilitres?

If glass **A** has a capacity of **200 millilitres**...

...what could be the capacity of glass **B**?

Can you explain your reasoning?

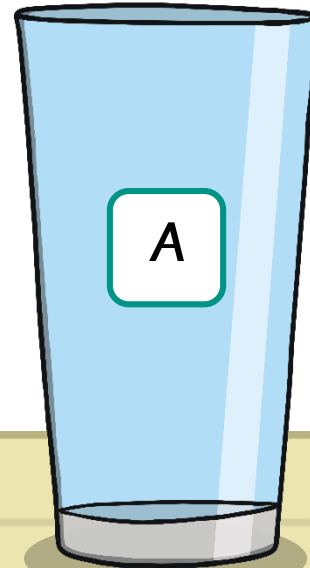
100ml



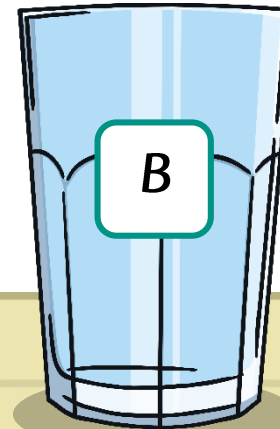
200ml

☐

300ml

☐

A



B

Glass **B** is smaller, so it has a smaller capacity.

LQ: Can I measure volume in millilitres?

If bowl **A** has a capacity of **300 millilitres**...

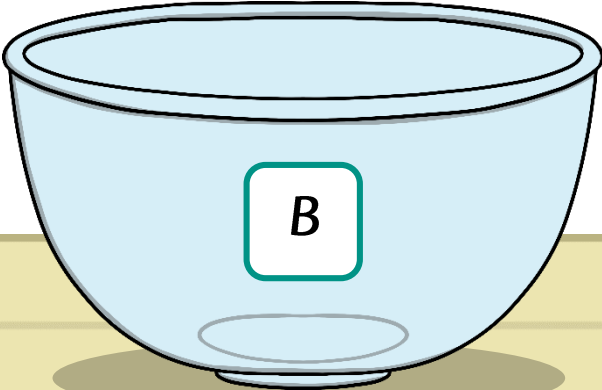
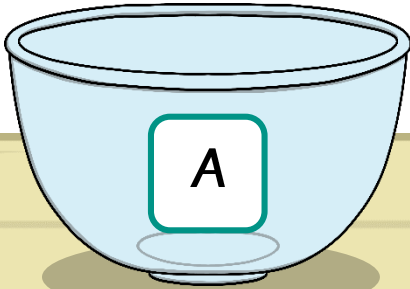
...what could be the capacity of bowl **B**?

Can you explain your reasoning?

250ml ☐

300ml ☐

400ml ☒

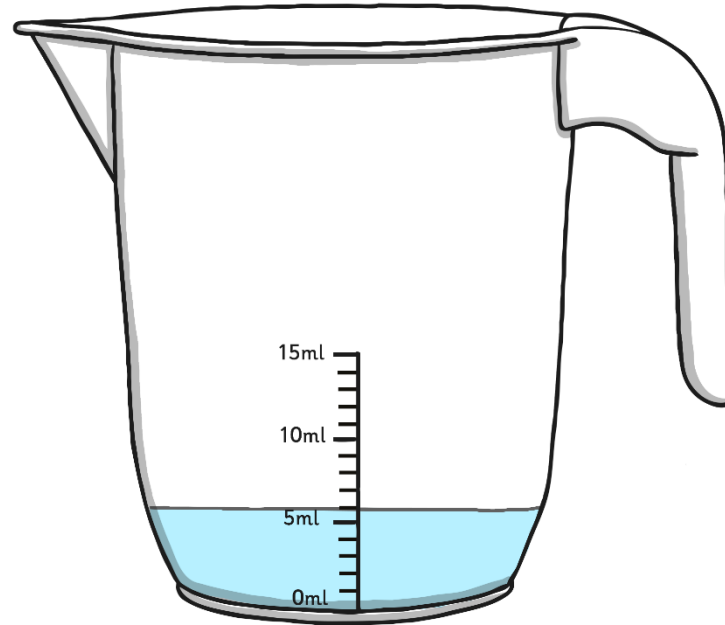


Bowl **B** is larger, so it has a greater capacity.

13.05.2024

LQ: Can I measure volume in millilitres?

How much liquid is in this jug?

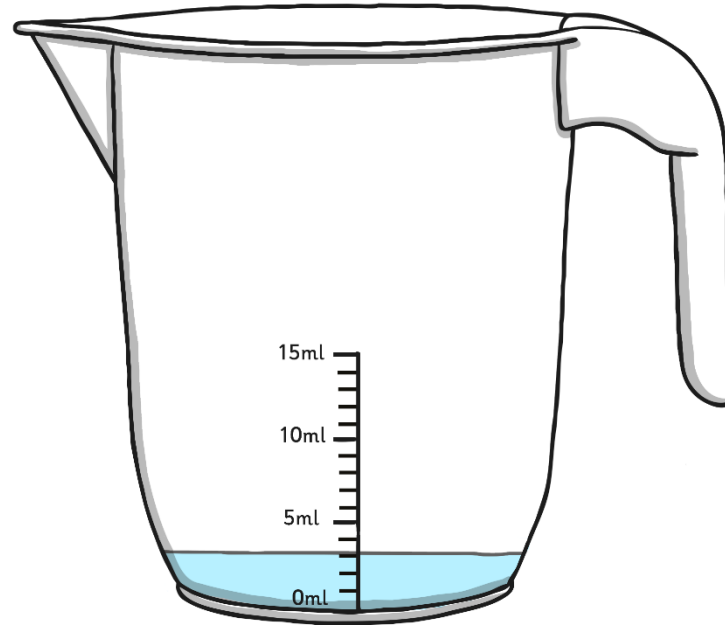


6 ml

13.05.2024

LQ: *Can I measure volume in millilitres?*

How much liquid is in this jug?

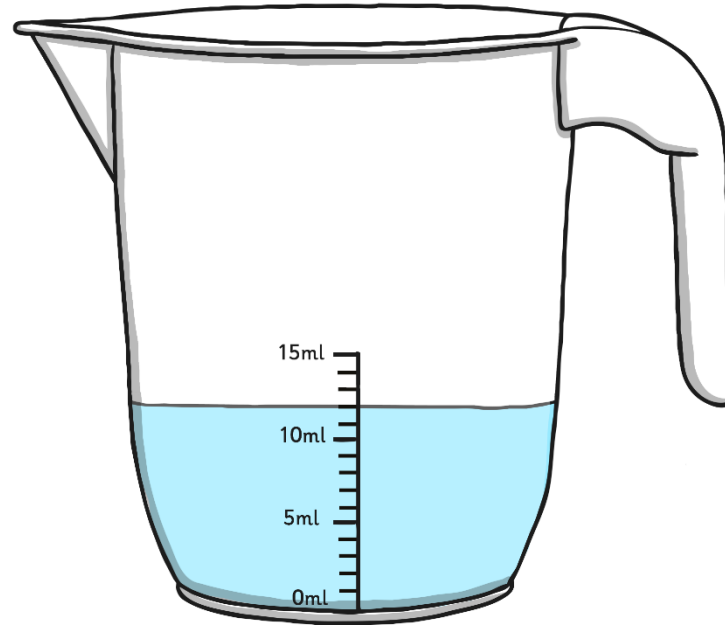


3 ml

13.05.2024

LQ: *Can I measure volume in millilitres?*

How much liquid is in this jug?

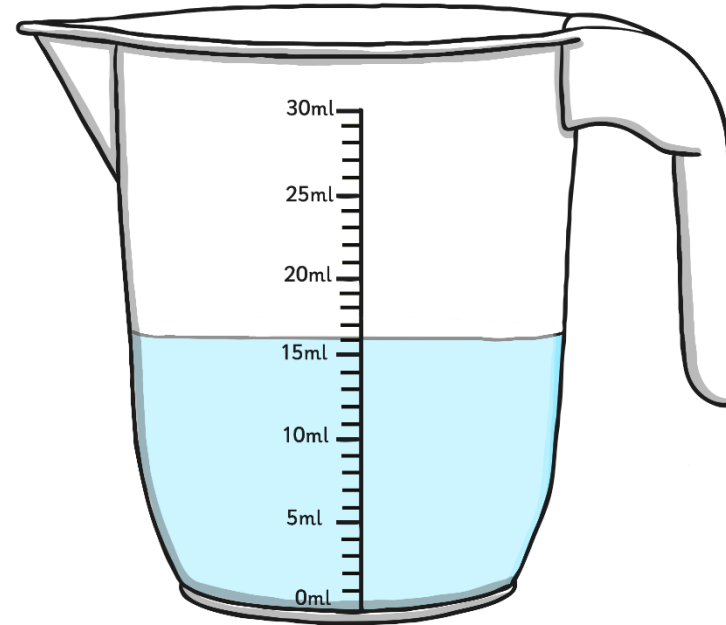


1 ml
2

13.05.2024

LQ: Can I measure volume in millilitres?

How much liquid is in this jug?

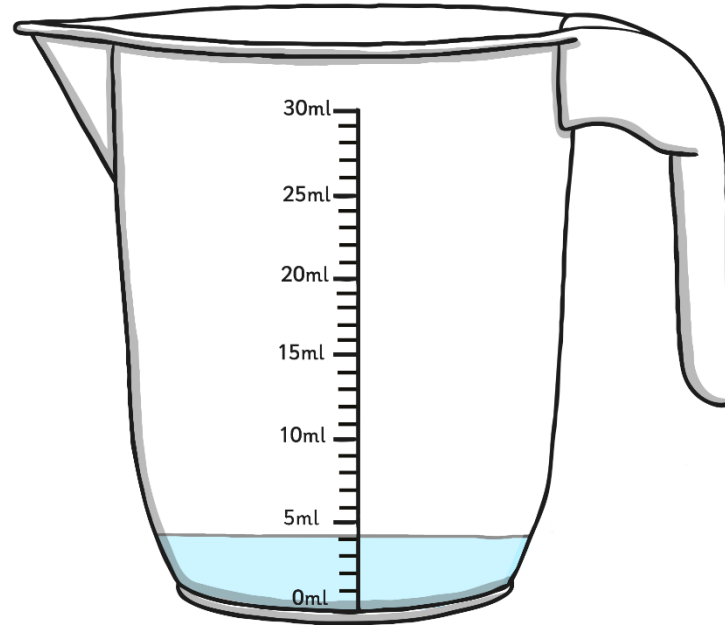


1 ml
6

13.05.2024

LQ: Can I measure volume in millilitres?

How much liquid is in this jug?

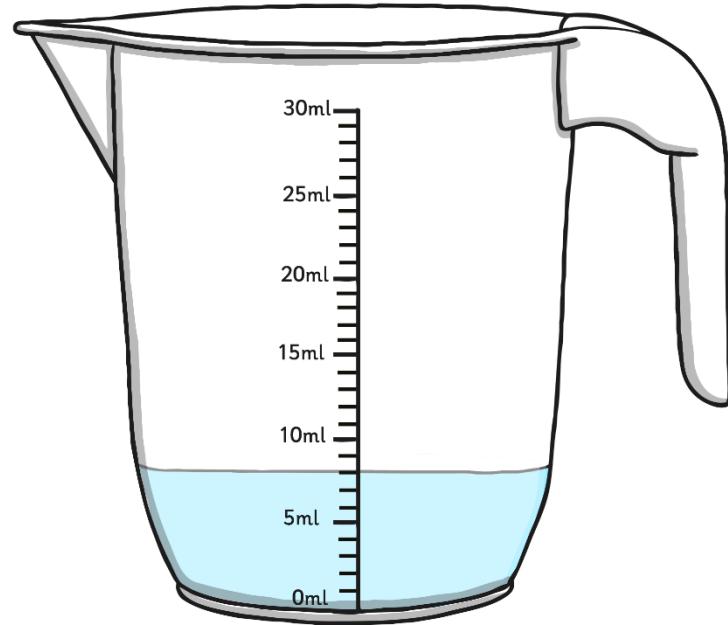


4 ml

13.05.2024

LQ: *Can I measure volume in millilitres?*

How much liquid is in this jug?

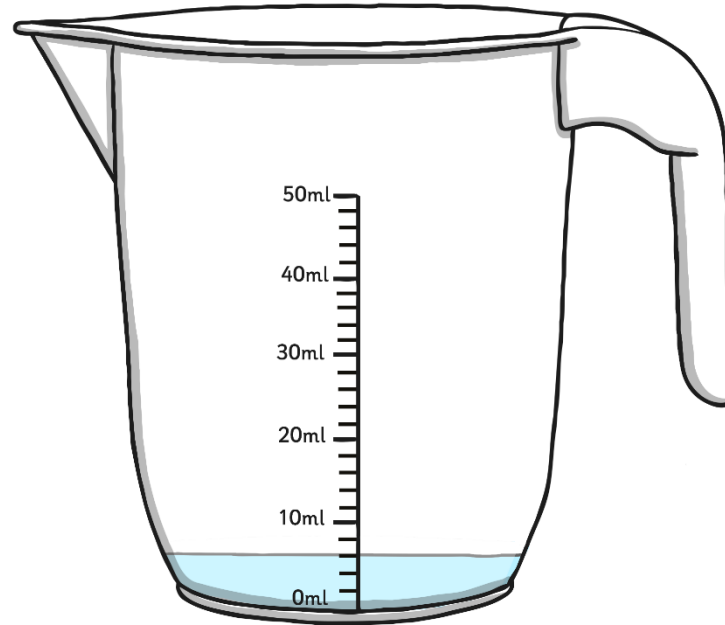


8 ml

13.05.2024

LQ: *Can I measure volume in millilitres?*

How much liquid is in this jug?

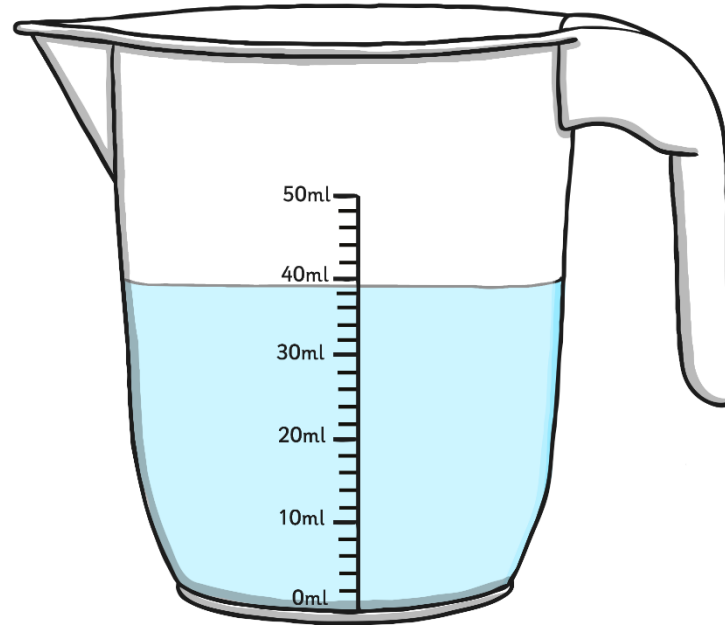


6 ml

13.05.2024

LQ: Can I measure volume in millilitres?

How much liquid is in this jug?

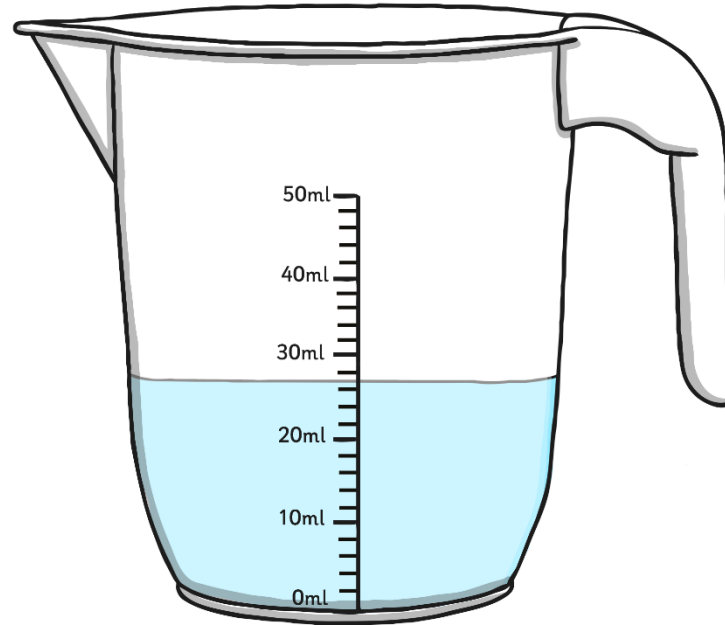


3 ml
9

13.05.2024

LQ: Can I measure volume in millilitres?

How much liquid is in this jug?

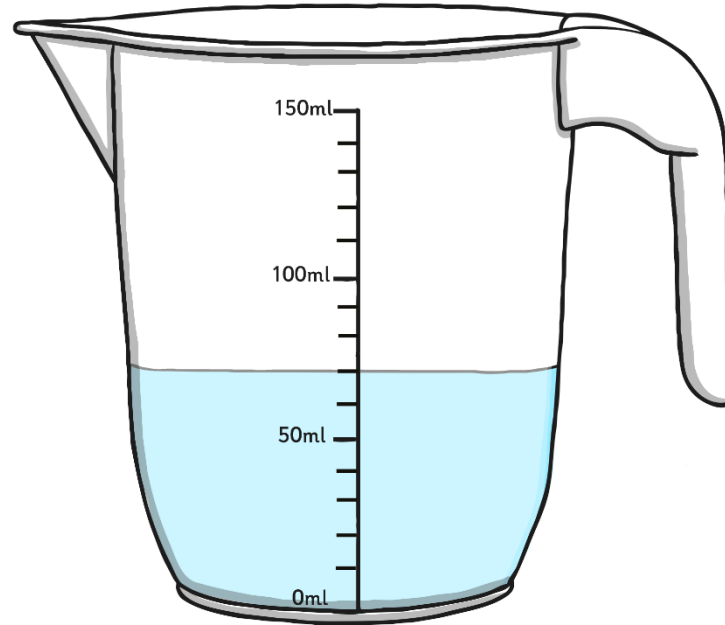


2 ml
7

13.05.2024

LQ: *Can I measure volume in millilitres?*

How much liquid is in this jug?

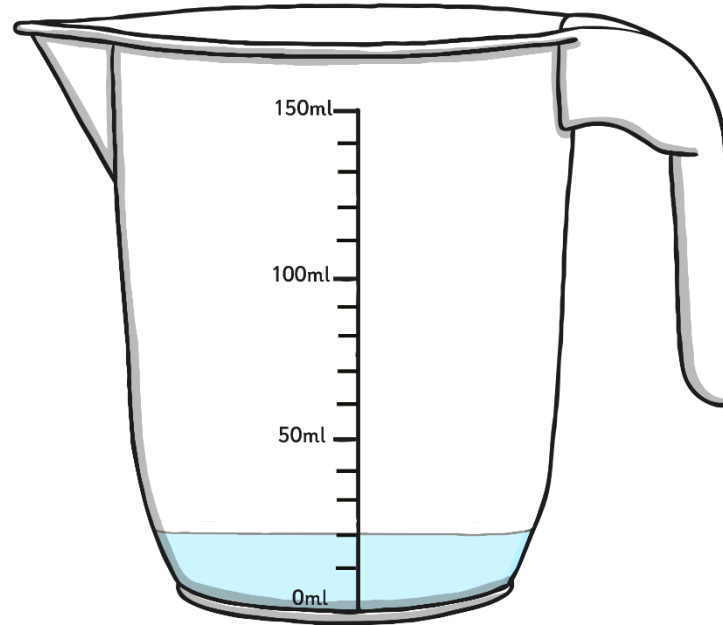


70 ml

13.05.2024

LQ: Can I measure volume in millilitres?

How much liquid is in this jug?



20 ml

Self assessment

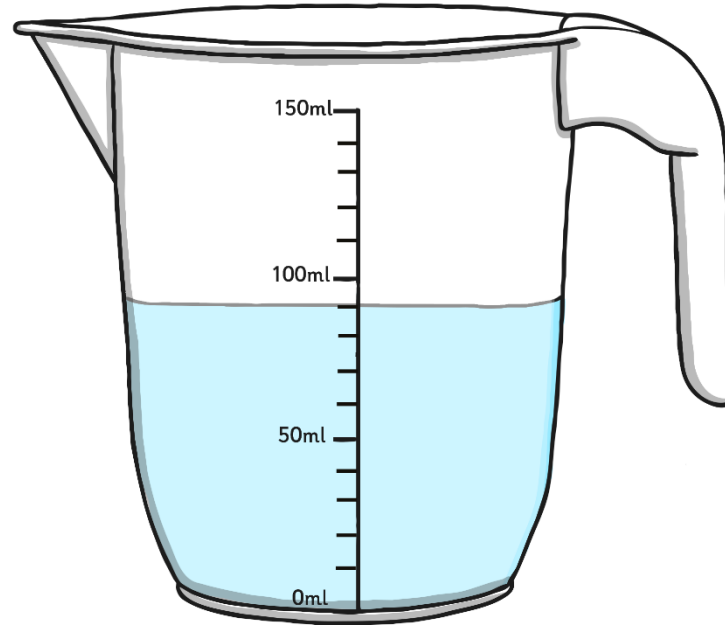
Do you understand how to measure in millilitres?



13.05.2024

LQ: Can I measure volume in millilitres?

How much liquid is in this jug?



90 ml

13.05.2024

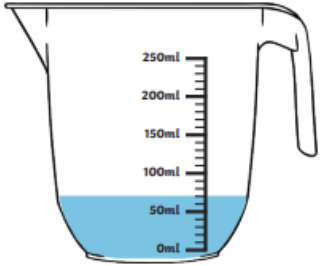
LQ: Can I measure volume in millilitres?

Self assessment

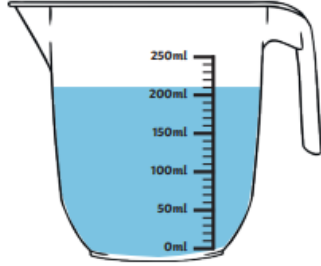
Do you understand what to do?



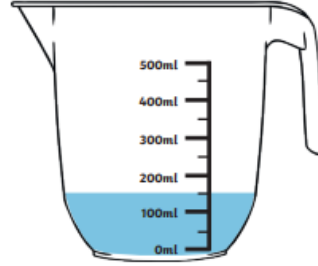
How much water is there in each jug?



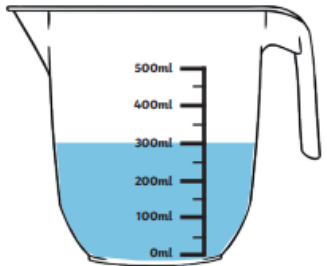
1. _____ ml



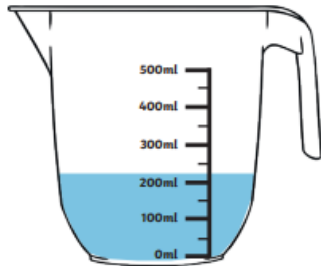
2. _____ ml



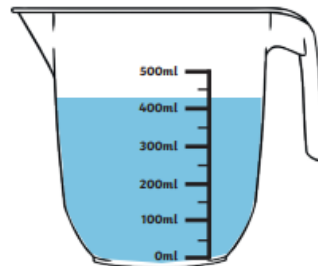
3. _____ ml



4. _____ ml



5. _____ ml



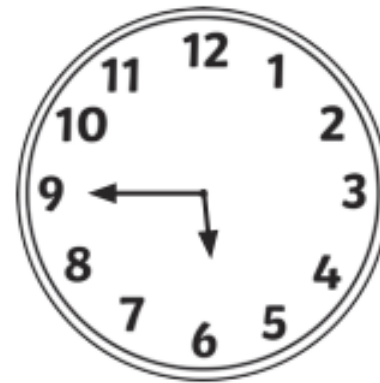
6. _____ ml

Let's practice measuring volume in millilitres.



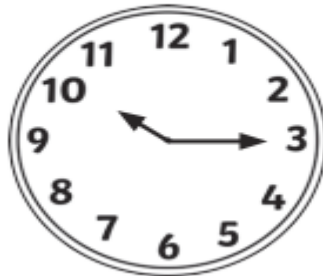


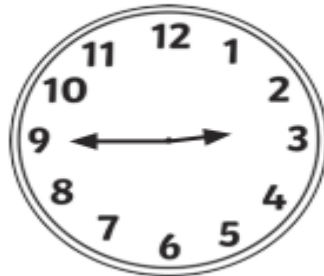


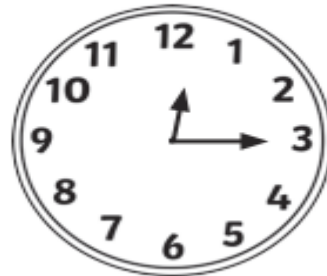


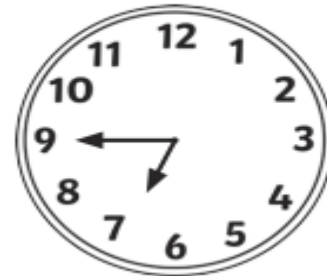
Challenge

Write the digital time that is **half an hour before** the time shown on each analogue clock.









14.05.2024



LQ: Can I measure volume in litres?

Steps to Success:

I can identify tools that help me measure volume.

I can measure the volume in standard units (litres).

I can record the volume in litres.



★ STAR WORDS ★



volume

capacity



litres

millilitres



measure

scale



compare



14.05.2024

LQ: Can I measure volume in litres?



TP - What do you remember about volume and capacity?

Capacity is how much a container can hold in total.



Volume is how much is filled up. There is 60ml of water in this container.

1000 millilitres = 1 litre

14.05.2024

LQ: Can I measure volume in litres?

What does the 'l' stand for?

Today we are going to measure volumes in litres.

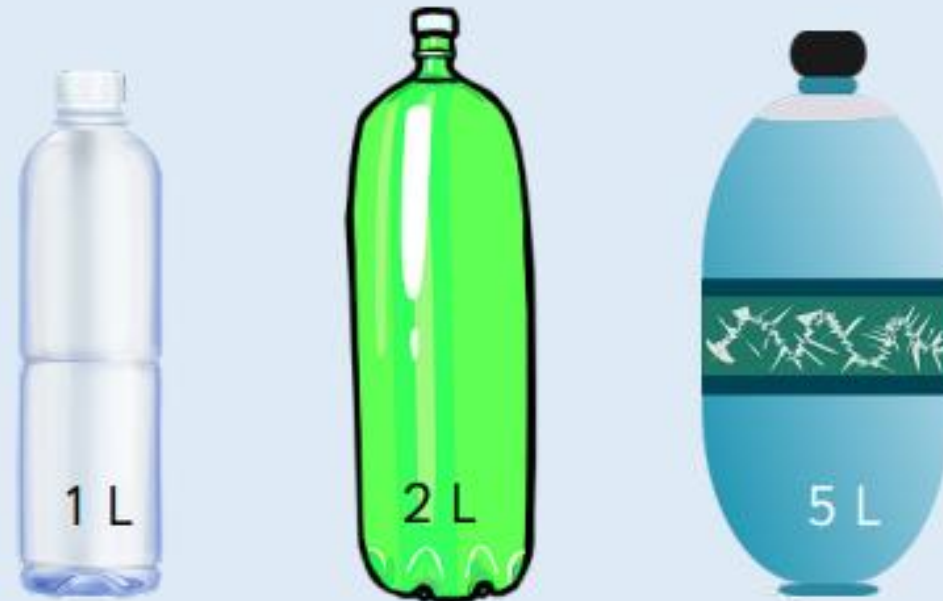


The 'l' stand for litre.
Litre is a larger unit to
measure volume. 1 litre of
water equals to 1000
millilitres.

We use litres for larger
quantities of liquid.

14.05.2024

LQ: Can I measure volume in litres?



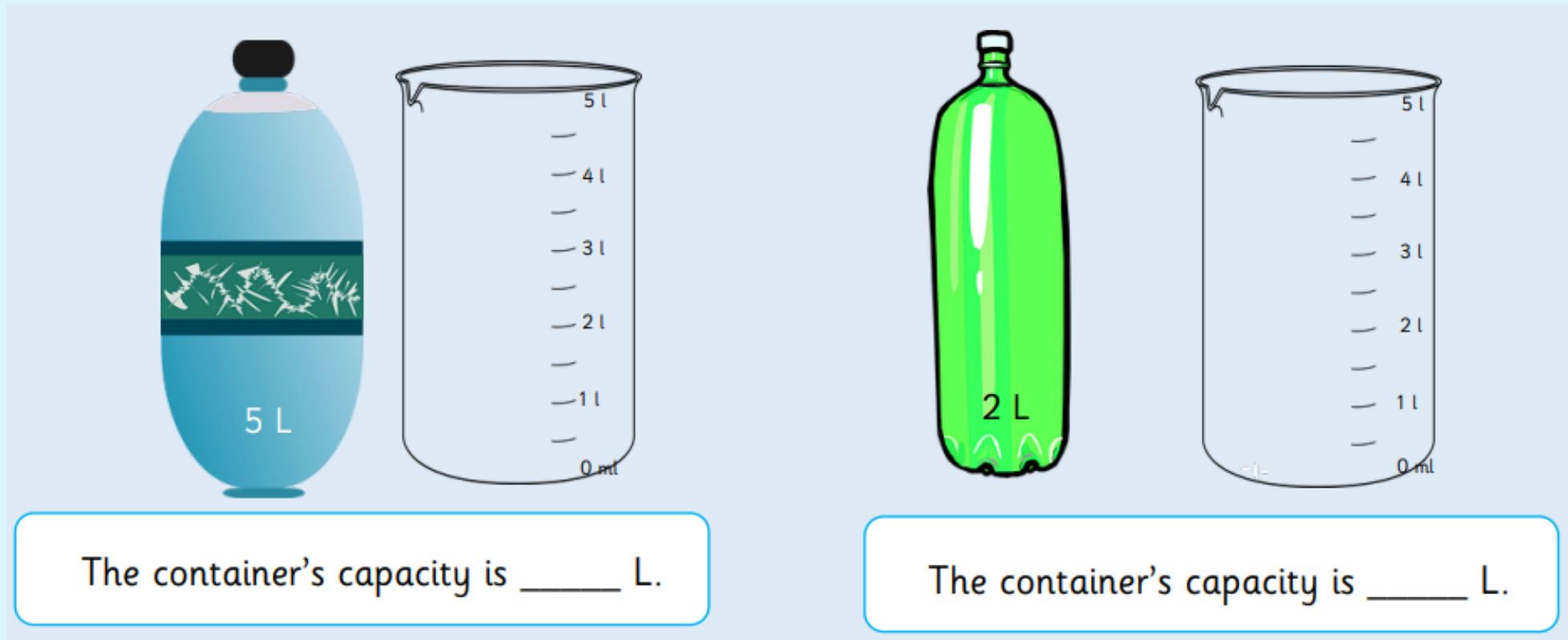
Can we measure these in ml as well?

What is the same about millilitres and litres?

What is different about them?

16.06.22

LQ: Can I measure volume in litres?



If we poured 2 L of water into the cylinder, what would the volume in the cylinder be?

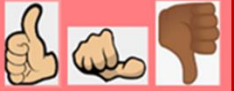
What would the volume in the bottle be?

14.05.2024

LQ: Can I measure volume in litres?

Self assessment

Do you understand how to measure volume in litres?



Let's use different containers. Estimate the capacity of each one, then measure the capacity in litres.






I will pour the water from the small water bottle into the larger bottle. Do you think it will fill the larger bottle up? Why/Why not?

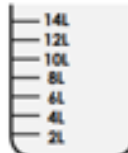
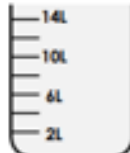
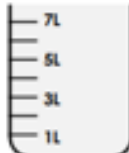

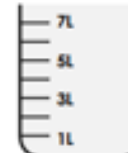
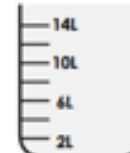
14.05.2024

LQ: Can I measure volume in litres?



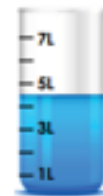

Complete the tasks in your book.

<p>1. Colour the containers below to the correct level.</p> <p>Complete the comparison using the correct symbols below.</p>	<p>2. Look carefully at the containers.</p>  <p>The tallest container has the largest capacity.</p> <p>Is it <i>always</i> true, <i>sometimes</i> true or <i>never</i> true?</p> <p>Explain your answer.</p>	<p>3. It takes 5 bottles to fill the pan. How many bottles will it take to fill 2 pans?</p>   <p>This pot is larger than the pan. It takes 3 more bottles to fill it.</p> <p>How many bottles does it need to fill it half-full?</p>
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1. Colour the containers below to the correct level.

					
<div>14L</div>	<div>12L</div>	<div>2L</div>	<div>1L</div>	<div>4L</div>	<div>8L</div>

Complete the comparison using the correct symbols

	<div></div>		<div></div>		<div></div>		
	<div><</div>	<div>></div>	<div>=</div>		<div><</div>	<div>></div>	<div>=</div>

Self assessment

Do you understand what to do?

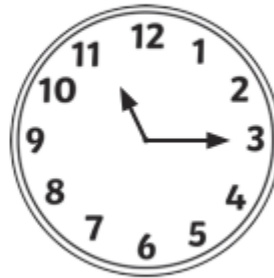


Mental Maths



Challenge

Write the digital time that is **15 minutes after** the time shown on each analogue clock.



Aim

- *To measure volume and capacity in litres.*

Success Criteria

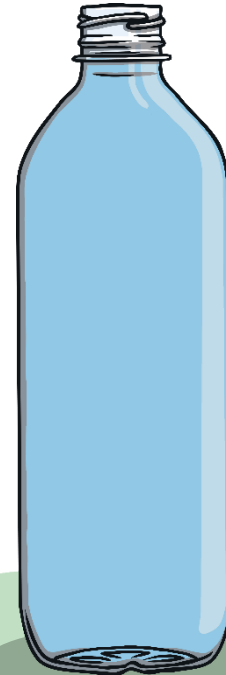
- **Statement 1**
 - *I can use measuring vessels to measure volume and capacity in litres.*
- **Statement 2**
 - *I can estimate volume and capacity in litres.*
 - *I can read and mark scales showing volume and capacity in litres.*
 - *I can solve challenges relating to measuring litres.*
- **Sub-Statement 1**

*1 litre has the same capacity as 1000 millilitres.
Today we'll investigate litres.*

1ml



1l

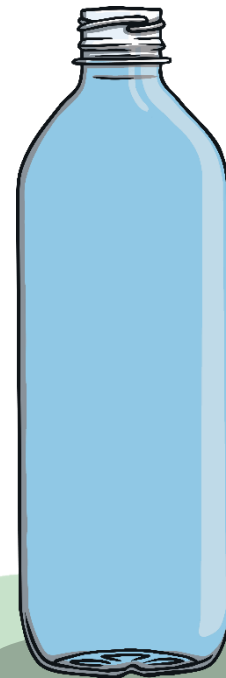


We can show *millilitres* as *ml* and *litres* as *l*.

1ml



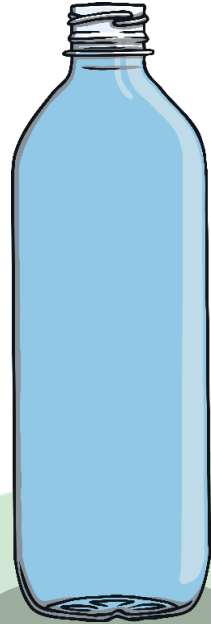
1l



These have been measured in **litres**.

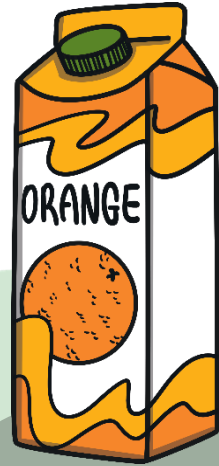
Can you think of any more?

water



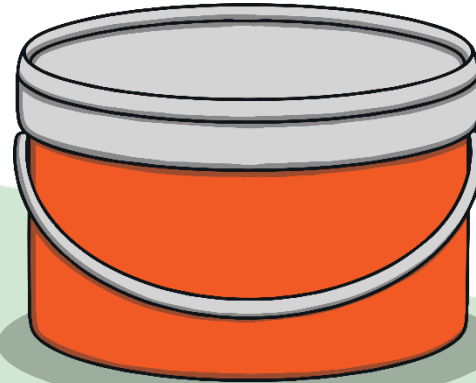
2 litres

juice



1 litre

paint



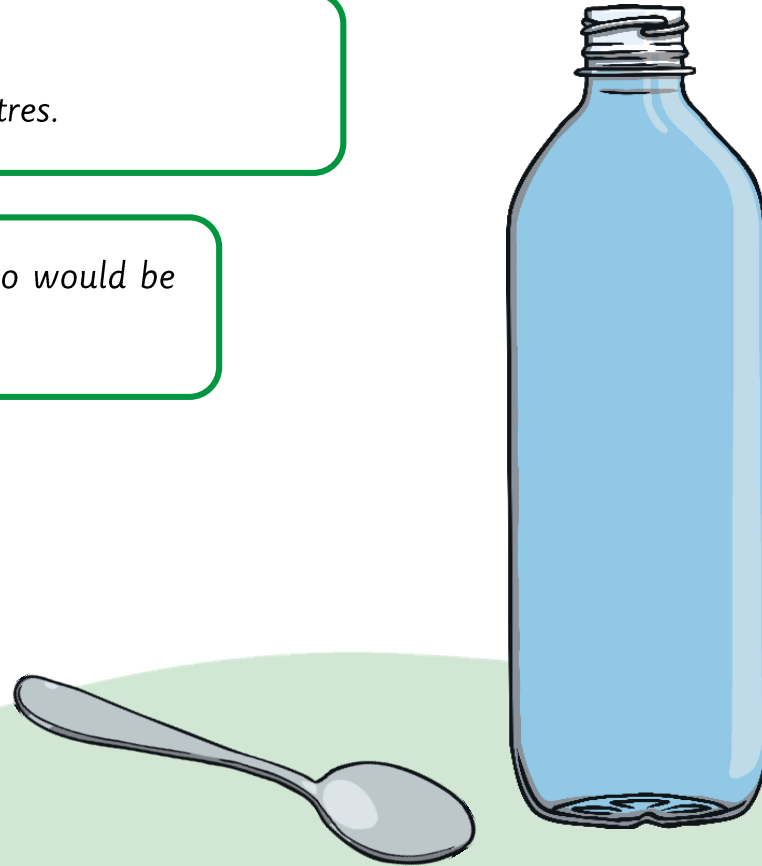
5 litres

Which would you choose to measure **litres**?

Can you explain why?

The spoon holds 5 or 10 millilitres.
1 litre is greater than 5 or 10 millilitres.

The bottle has a greater capacity, so would be
a better choice.



This bottle has a capacity of **1 litre**. Pick a container.

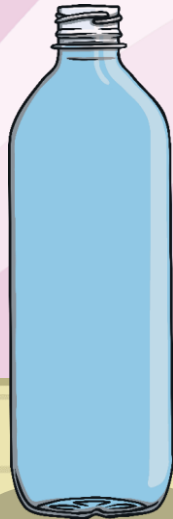
Compare the capacity with **1 litre**. Can your friend identify it?

Use these words to help you:

greater than

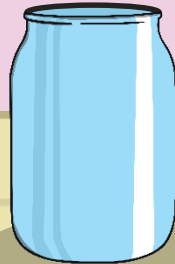
smaller than

equal to

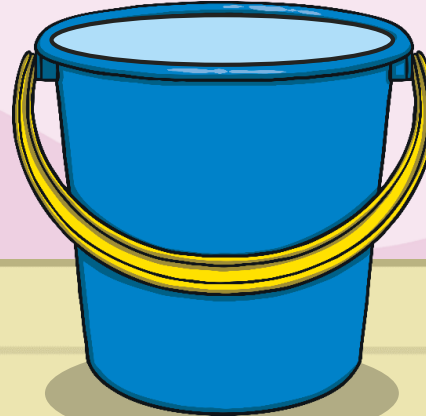


1 litre

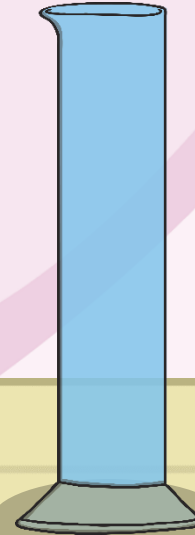
jar



bucket



cylinder



Comparing Capacity with One Litre

greater than

smaller than

equal to

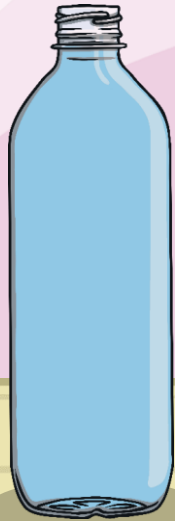
The capacity of the

jar

s

smaller than

.



1 litre



jar

Comparing Capacity with One Litre

greater than

smaller than

equal to

The capacity of the

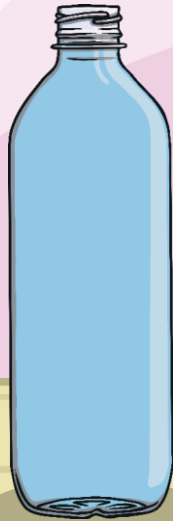
bucket

s

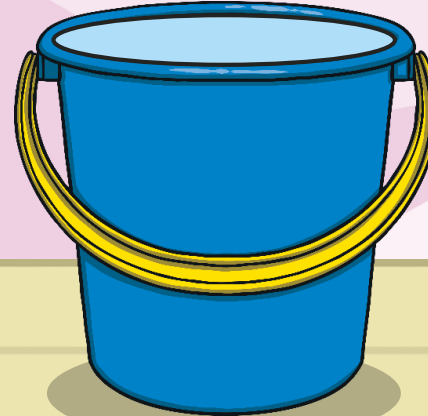
greater than

.

bucket



1 litre



Comparing Capacity with One Litre

greater than

smaller than

equal to

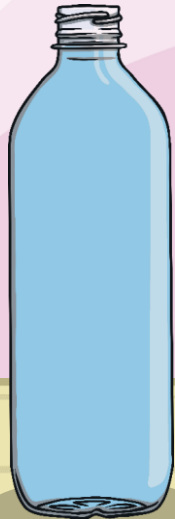
The capacity of the

cylinder

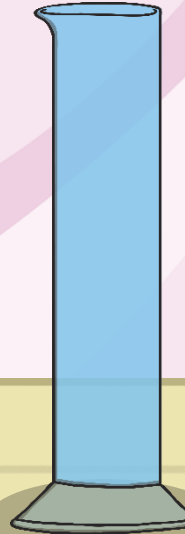
s

equal to

cylinder



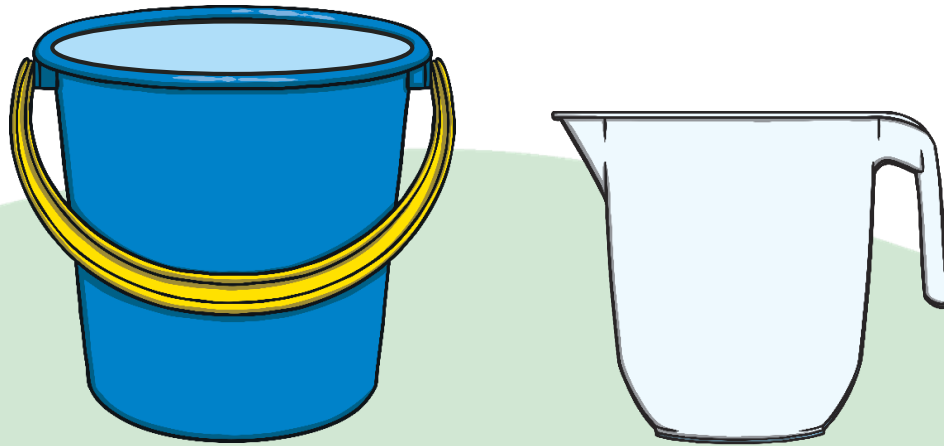
1 litre



How can we use the **1 litre** jug to find the **capacity** of the bucket?

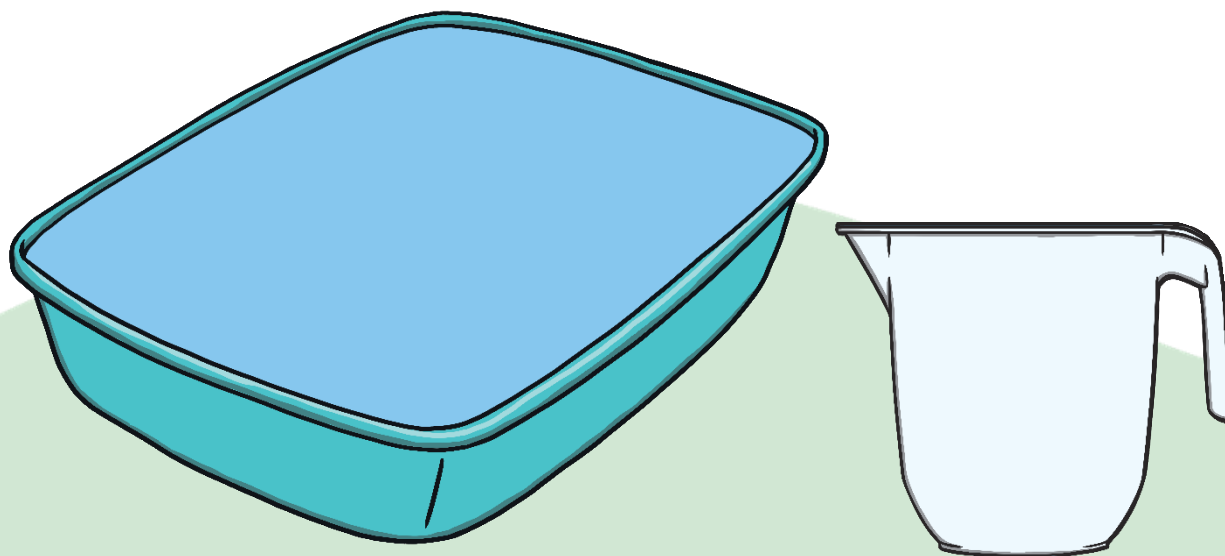
Fill the jug and pour it into the bucket.

Repeat until the bucket is full.



This bucket has a capacity of **2 litres**.

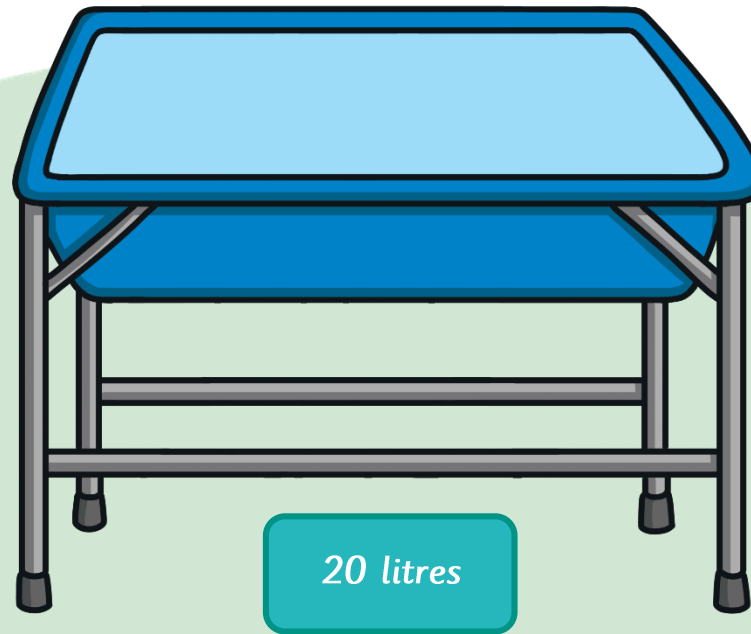
Find the capacity of the washing up bowl.



This washing up bowl has a capacity of **9 litres**.

How many buckets of water filled the tray?

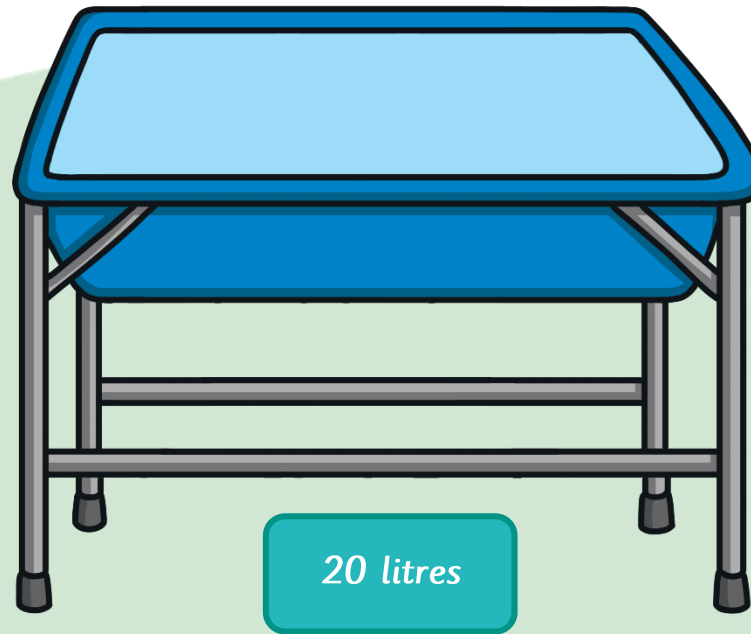
What can we do to find out?



Count the number of steps of 2 it takes to reach 20.

Use number facts we know: $10 \times 2 = 20$.

10 buckets of water filled the tray.



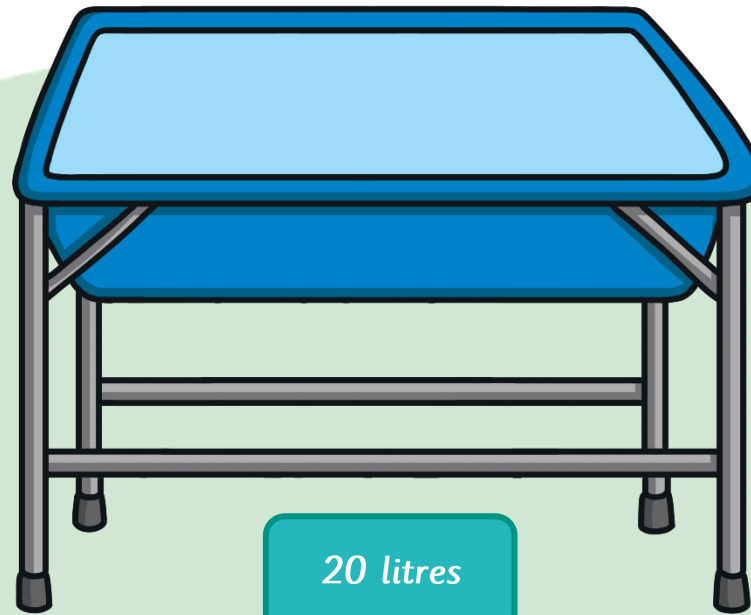
What if we used 5-litre buckets?

$$4 \times 5 = 20$$

So, 4 buckets filled the tray.

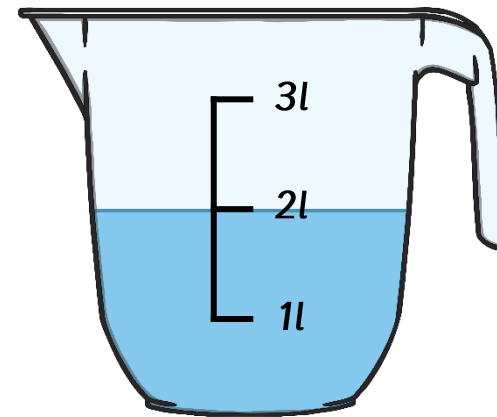
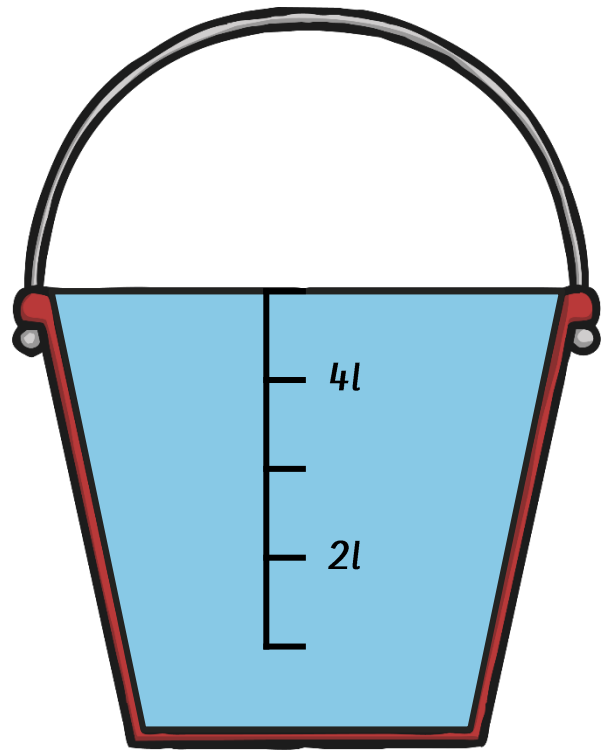


5 litres

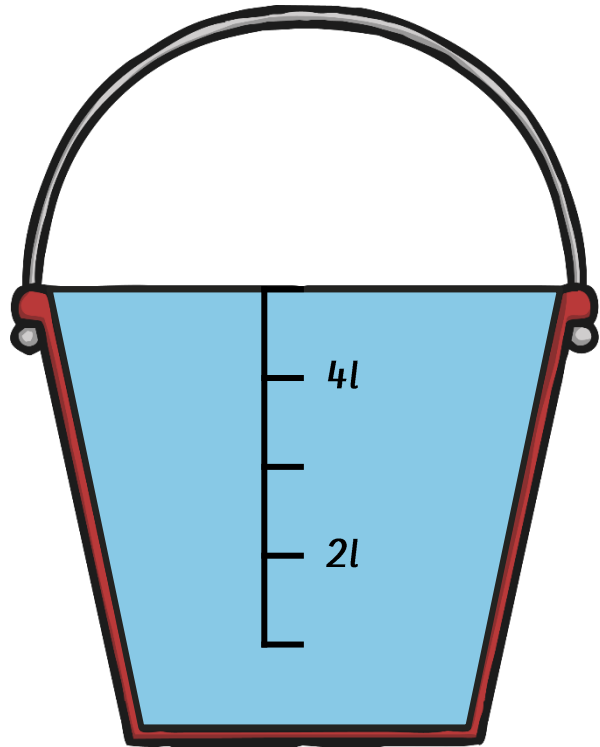


20 litres

We can also use measuring jugs and buckets to measure volume and capacity in **litres**.



What can you tell me about the bucket?



The 'l' shows us that it measures litres.

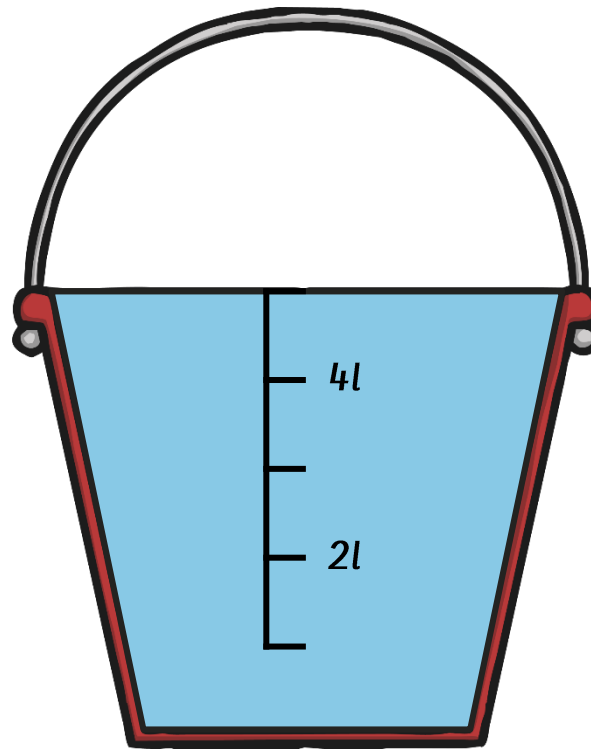
It shows steps of 2.

The bucket is full.

The top mark isn't numbered.

How much water is the bucket holding?

How do you know?



5 comes after 4.

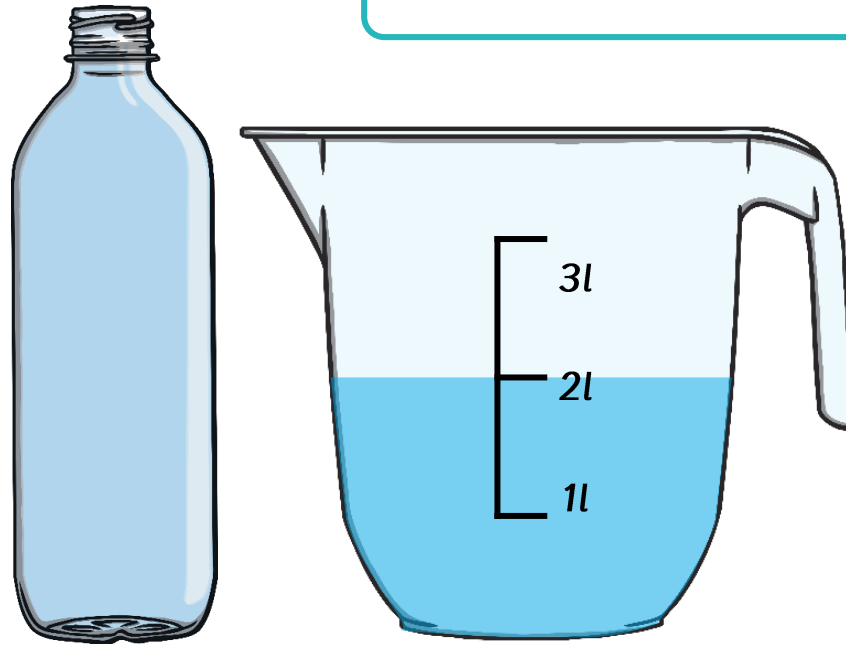
The bucket is holding 5 litres.

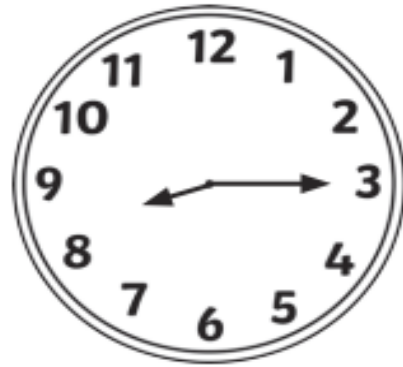
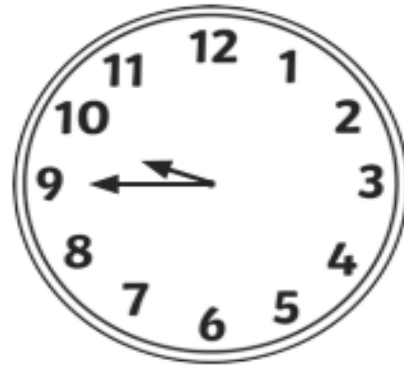
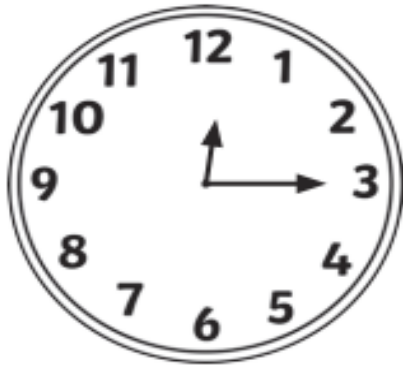
How can we use the jug to find the capacity of the bottle?

Pour the full bottle into the jug.

Check the mark where the water reaches.

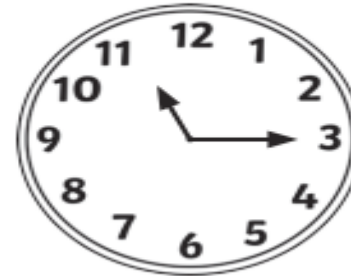
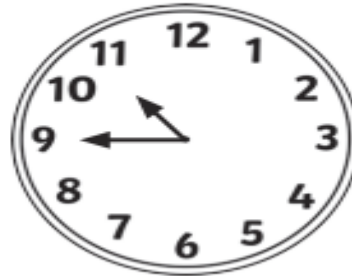
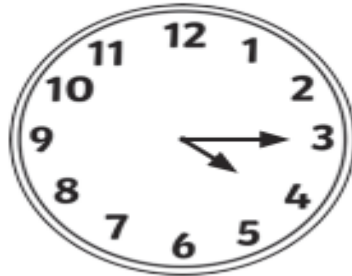
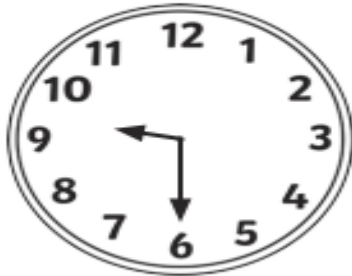
This bottle has a capacity of 2 litres.

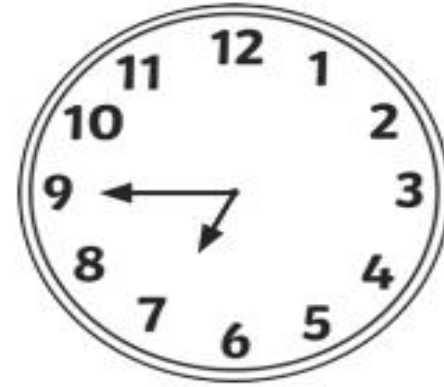
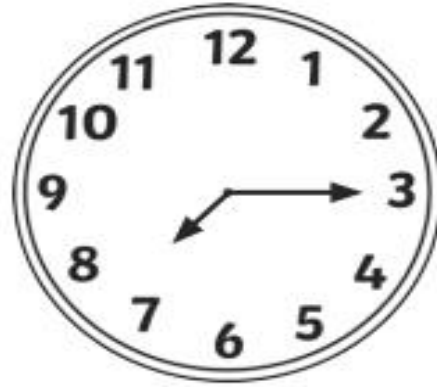




Challenge:

Write the digital time that is **15 minutes after** the time shown on each analogue clock.





Challenge

Write the digital time that is **15 minutes before** the time shown on each analogue clock.

