Measure capacity and volume in millilitres

Notes and guidance

In this small step, children begin to explore capacity and volume. They can find the concept of capacity and volume confusing and often use the terms interchangeably. Capacity is the maximum amount of liquid a container can hold when full, whereas volume refers to the specific amount of liquid in a container.

In this step, children only explore millilitres as a measure of capacity or volume.

It is important to address the common misconception that taller containers always have a greater capacity. Giving children time to fill and pour liquids from a range of containers can support them in this, as well as helping them become more confident with estimating capacities.

Things to look out for

- Children may confuse the terms "capacity" and "volume".
- Children may think that taller containers have a greater capacity.
- Children may find interpreting scales difficult, for example working out what the marked increments represent and also halfway between two marks.

Key questions

- What is the difference between capacity and volume?
- What is the capacity of the container? How do you know?
- What is the difference between the start and end values on the scale?
- How many equal intervals are there?
- What is each interval worth?
- How can you work out halfway between two marks?
- What unit is the volume/capacity measured in?

Possible sentence stems

- The scale has been split into _____ equal parts, so each mark represents _____ ml.
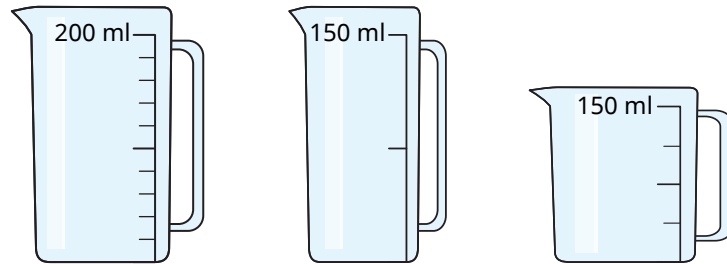- The water is full to the _____ mark, so the volume of water is _____ ml.

National Curriculum links

- Measure, compare, add and subtract: lengths (m/cm/mm); mass (kg/g); volume/capacity (l/ml)

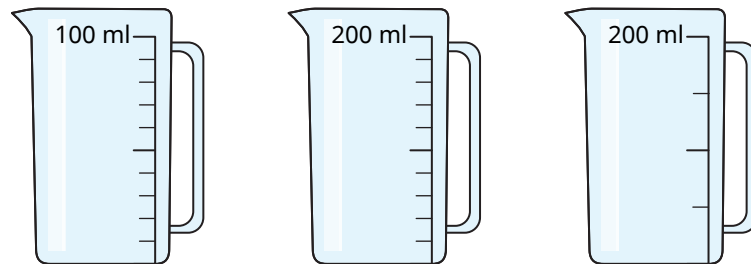# Measure capacity and volume in millilitres

Key learning

- What is the capacity of each jug?

  200 ml

  150 ml

  150 ml

- What is the volume of water in each jug?

  500 ml
  450 ml
  400 ml
  350 ml
  300 ml
  250 ml
  200 ml
  150 ml
  100 ml
  50 ml

  100 ml

  200 ml

- Label the divisions on the scales of the jugs.

  Complete the sentences to help.

  100 ml

  200 ml

  200 ml

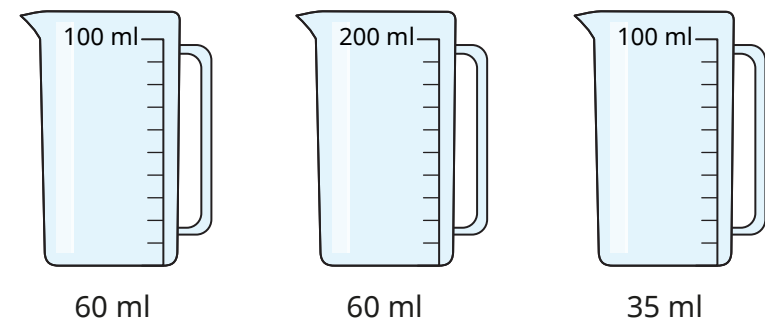 The difference between the start and end values on the scale is _____

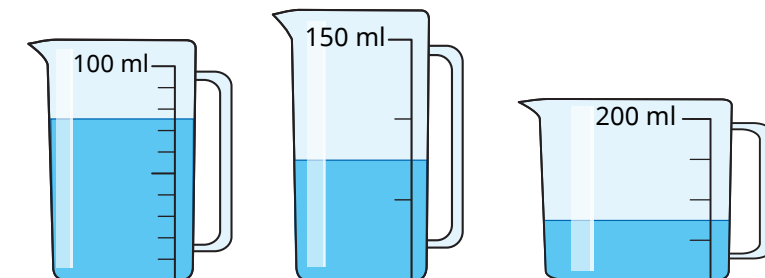 There are _____ equal intervals.

  _____ ÷ _____ = _____
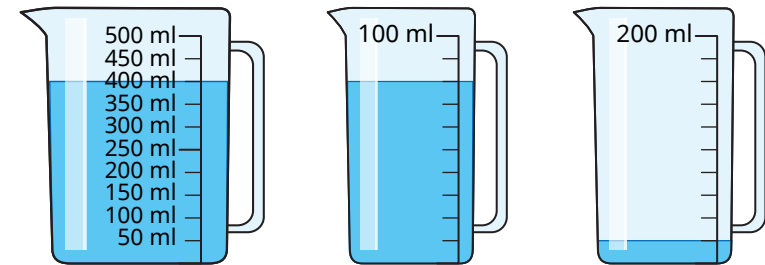
- Colour the jugs to show where the given amount of water will reach.

  100 ml

  200 ml

  100 ml

  60 ml

  60 ml

  35 ml

- What is the volume of water in each jug?

  100 ml

  150 ml

  200 ml

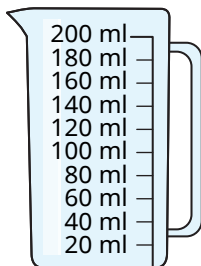# Measure capacity and volume in millilitres

Reasoning and problem solving

Tiny needs 150 ml of water.

A

200 ml
180 ml
160 ml
140 ml
120 ml
100 ml
80 ml
60 ml
40 ml
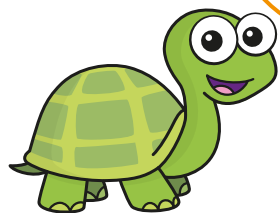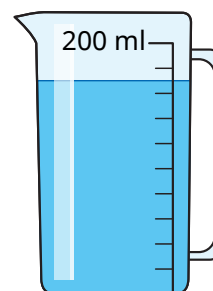20 ml

B

100 ml
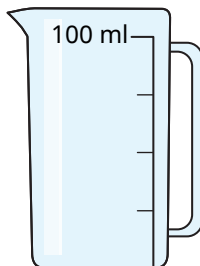
> I cannot use either of these jugs to measure 150 ml.

Do you agree with Tiny?

Explain why.

No

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200 ml

A

B

Cup A has a capacity of 30 ml.

Cup B has a capacity of 20 ml.

How many cups can be filled so that there is no water left in the jug?

How many different answers can you find?

multiple possible answers, e.g.
1 of cup A and
7 of cup B