Measure capacity and volume in litres and millilitres

Notes and guidance

In this small step, children use the units of litres and millilitres to measure capacity and volume. They describe mixed amounts as "_____ litres and _____ millilitres", so do not need to use decimal notation or make conversions such as 2 litres and 400 ml is equal to 2,400 ml.

Children use their learning from the previous small step alongside the fact that 1,000 ml is equal to 1 litre to allow them to interpret different scales. Interpreting scales is a vital skill, so children should be exposed to a range of different-sized containers as well as scales split into a different number of intervals.

Continue to reinforce the difference between capacity and volume.

Things to look out for

- Children may find interpreting scales difficult, for example working out what the marked divisions represent and also halfway between two marks.

- Children may find the relationship between litres and millilitres confusing, leading to statements such as "300 ml is greater than 3 litres."

Key questions

- What is the difference between capacity and volume?

- What is the capacity of the container? How do you know?

- How many millilitres are there in 1 litre?

- How many intervals are there between 0 and 1 litre? What is each interval worth?

- How can you work out halfway between two marks on a scale?

- In this question, what unit is the volume/capacity measured in?

Possible sentence stems

- The arrow on the scale is pointing to _____ l and _____ ml

- The volume is between _____ l and _____ l
  There are _____ intervals.
  Each interval is worth _____ ml.
  The volume is _____ l and _____ ml.

National Curriculum links

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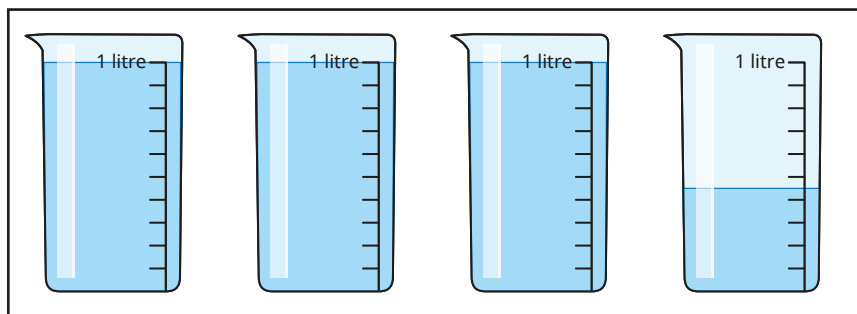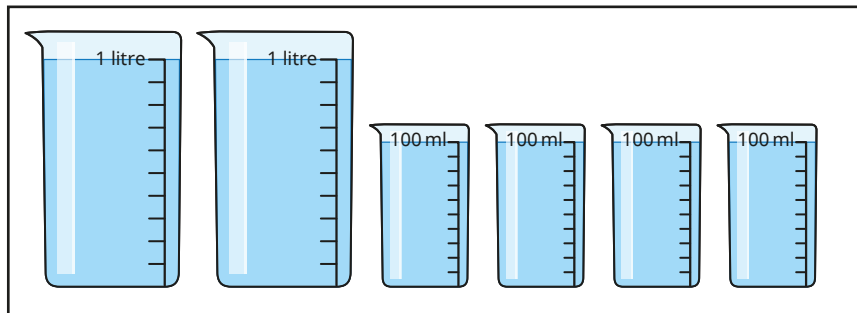
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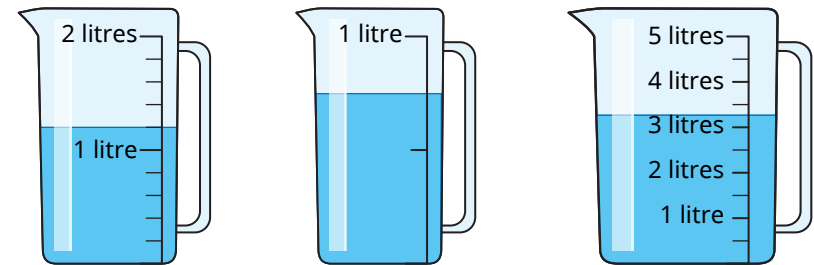
Key learning

- Label the missing divisions on the jugs.

- How much water is there in total in each set of beakers?
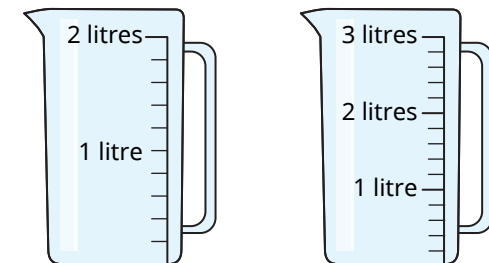

- What is the volume of water in each jug?

  How accurate do you think your answers are?

- Shade the jugs to show where the water will reach.
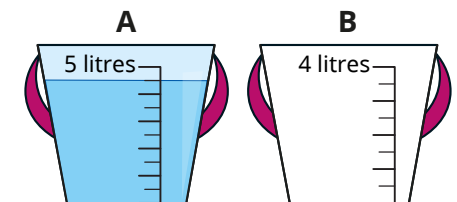

  1 l and 400 ml   2 l and 900 ml

- Half of the water from bucket A is poured into bucket B.
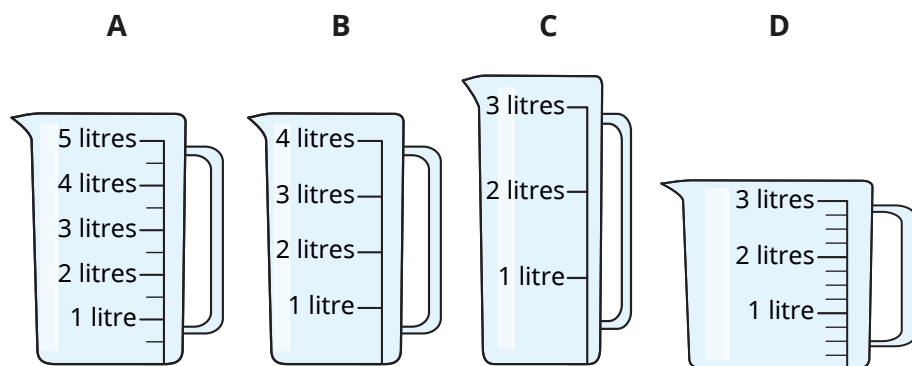
  Shade bucket B to show where the water will reach.

Measure capacity and volume in litres and millilitres

Reasoning and problem solving

Tommy needs to measure 2 litres and 350 ml as accurately as possible using these jugs.
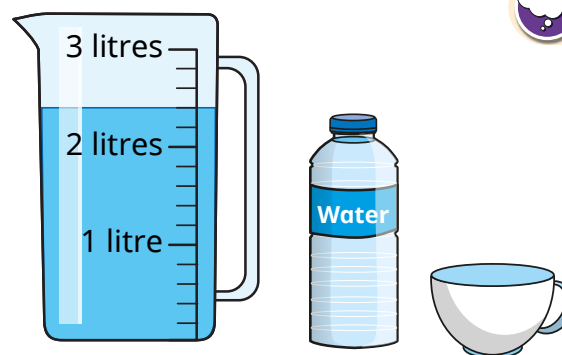
A   **B**   **C**   **D**

Which jug do you think will be easiest to use?

Which do you think will be hardest?

Explain your reasons.

Compare answers as a class.

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3 full cups hold the same amount of water as a bottle.

4 full bottles were used to put the water into the jug.

What is the capacity of a cup?

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

Is there more than one answer?

200 ml

multiple possible answers, e.g.
3 bottles + 3 cups