

Four operations with volume and capacity

Notes and guidance

In this final small step on volume and capacity, children use the skills they have learnt so far to answer questions involving the four operations. As with the similar step on mass, this is useful to consolidate learning and identify any possible gaps in understanding that children may have.

Children complete a range of one-step problems, identifying the operation needed to complete the calculation. They could do this by recognising key words, writing a number sentence or using a bar model or part-whole model. They need to be able to read scales accurately to complete the calculations without mistakes.

Challenge Year 2 children to complete multi-step problems involving volume and capacity. Initially, these may need to be modelled to help children break them down into smaller steps.

Things to look out for

- Children may not read scales accurately.
- Children may make calculation errors.
- Children may select the incorrect operation.

Key questions

- Do you need to add or subtract to solve the problem?
- What do you need to do first? How do you know?
- Is there more than one way to solve the problem?
- How could you write this as a number sentence?

Possible sentence stems

- To find the total volume, I need to _____ the volumes.
- To work out how much more container A holds, I need to ...
- First, I need to ... Then I need to ...

Single age small step links

- N/A

- Four operations with volume and capacity (Y2)

National Curriculum links

- Choose and use appropriate standard units to estimate and measure length/height in any direction (m/cm); mass (kg/g); temperature (°C); capacity (litres/ml) to the nearest appropriate unit, using rulers, scales, thermometers and measuring vessels (Y2)

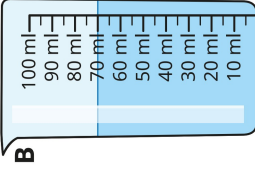
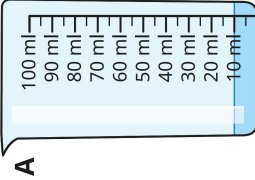
Four operations with volume and capacity

Key learning



Give children two containers with different amounts of water. Ask them, without measuring, to say which one has a greater volume. How do they know?
Now ask them to measure both volumes and work out the difference between them.

- Find the volume of water in each beaker.

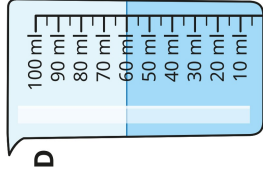
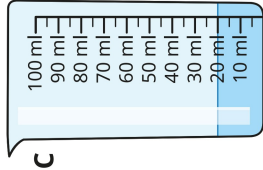
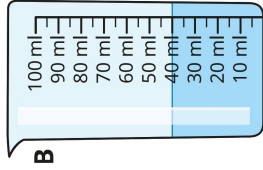
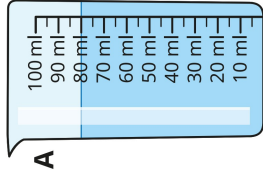


Then complete the sentences.

The total volume of water in jug A and jug B is ____ ml.

Jug A contains ____ ml less water than jug B.

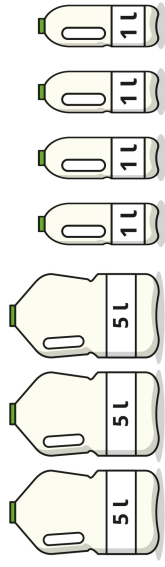
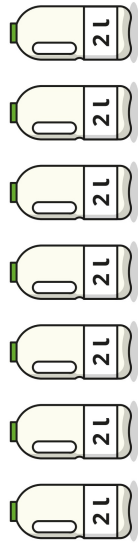
- Match the beakers so that the total volume is 100 ml.



Beaker E has 50 ml of water.

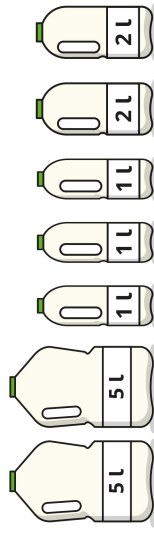
How much more water is needed so that the total volume is 100 ml?

- How much milk is there altogether in each set of bottles?

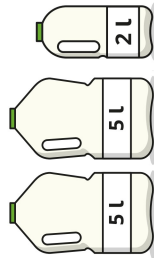


- Tom and Kay both have some milk.

Tom



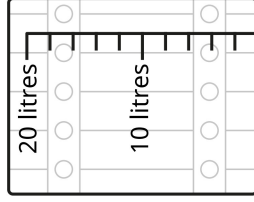
Kay



They each pour their milk into a barrel.

Draw a line to show where the milk will reach in each one.

Tom



Kay

