

# Reasoning and Problem Solving

## Step 5: Measure Capacity 1

### National Curriculum Objectives:

Mathematics Year 3: (3M1c) [Compare volume/capacity \(l/ml\)](#)

Mathematics Year 3: (3M2c) [Measure volume/capacity \(l/ml\)](#)

### Differentiation:

Questions 1, 4 and 7 (Problem Solving)

**Developing** Matching two containers and their capacity using the same units of measure (ml, l).

**Expected** Matching three containers and their capacity using the same units of measure (ml, l).

**Greater Depth** Matching four containers and their capacity using the same units of measure (ml, l).

Questions 2, 5 and 8 (Problem Solving)

**Developing** Reading the measurement on containers and identifying the capacity, using increments of 1, 2, 5 and 10.

**Expected** Reading the measurement on containers and identifying the capacity, using increments of 4, 8, 50, and 100.

**Greater Depth** Reading the measurement on containers and identifying the capacity, using increments of 4, 8, 50 and 100 and identifying how much the increments are increasing by each time.

Questions 3, 6 and 9 (Reasoning)

**Developing** Given a statement about capacity, determine whether the statement is correct.

**Expected** Given a statement about capacity, determine whether the statement is correct.

**Greater Depth** Given a statement about capacity, determine whether the statement is correct.

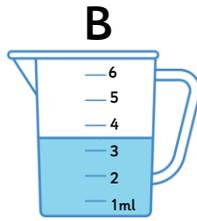
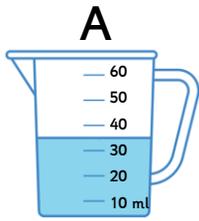
[More resources](#) which follow the same small steps as White Rose.

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# Reasoning and Problem Solving – Measure Capacity 1

1a. Match the containers to their capacity.



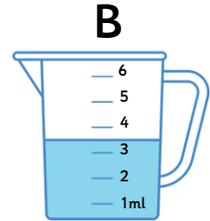
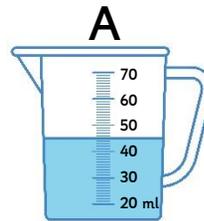
6ml

60ml



PS

1b. Match the containers to their capacity.



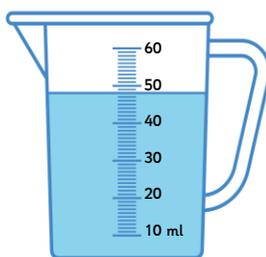
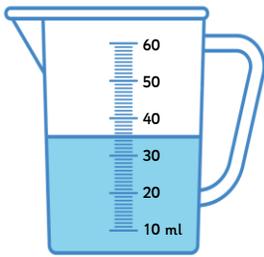
6ml

70ml



PS

2a. Henry has more than 20ml but less than 40ml of water in his container.



A

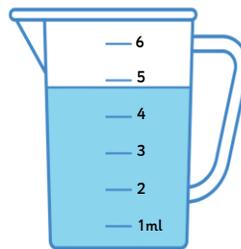
B

Which container belongs to Henry?



PS

2b. Kay has more than 2ml but less than 4ml of water in her container.



A

B

Which container belongs to Kay?

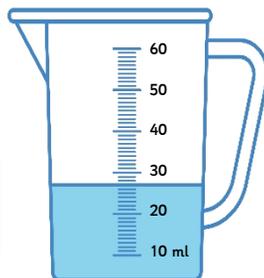


PS

3a. Ross is working out how much liquid is in the jug.



There are 27ml.



Is Ross correct? Explain why.

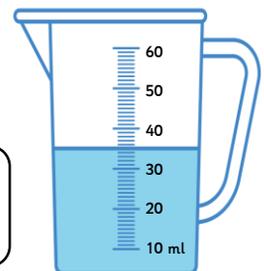


R

3b. Clara is working out how much liquid is in the jug.



There are 35ml.



Is Clara correct? Explain why.

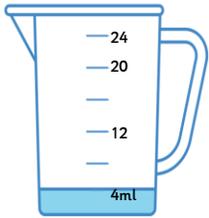


R

# Reasoning and Problem Solving – Measuring Capacity 1

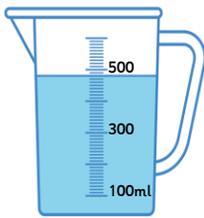
4a. Match the containers to their capacity.

A



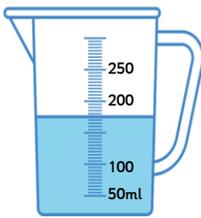
600ml

B



24ml

C



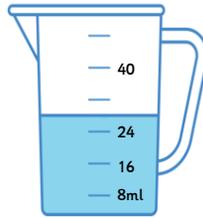
300ml



PS

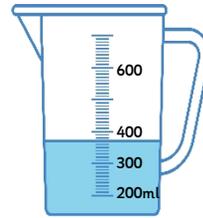
4b. Match the containers to their capacity.

A



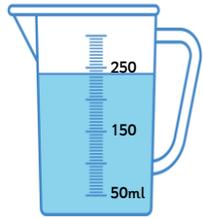
700ml

B



300ml

C

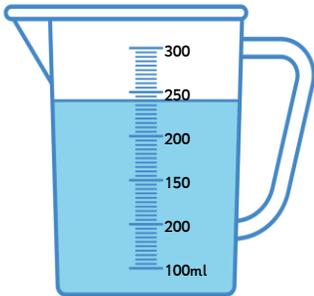


50ml

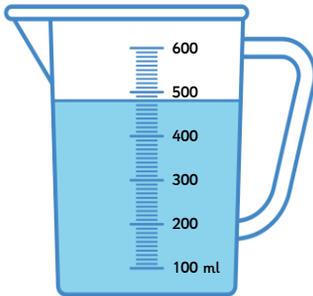


PS

5a. Lewis has more than 150ml but less than 400ml of liquid in his container.



A



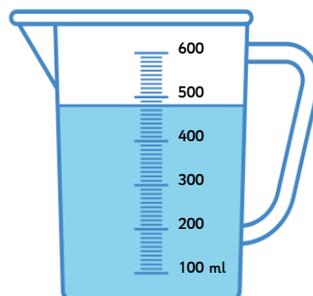
B

Which container belongs to Lewis?

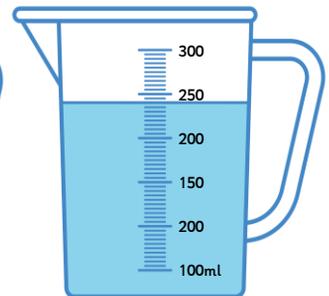


PS

5b. Salla has more than 250ml but less than 500ml of water in her container.



A



B

Which container belongs to Salla?

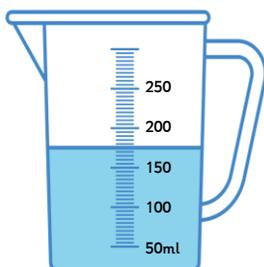


PS

6a. Lu is working out how much liquid is in the jug.



There are 175ml.



Is Lu correct? Explain why.

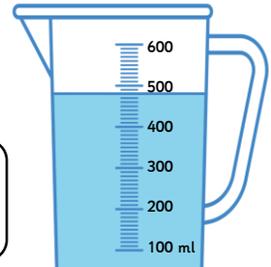


R

6b. Dani is working out how much liquid is in the jug.



There are 500ml.



Is Dani correct? Explain why.

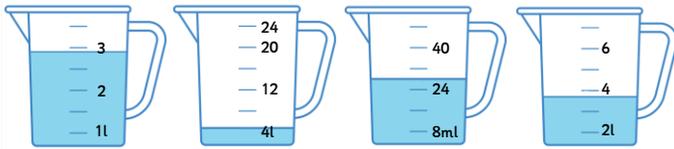


R

# Reasoning and Problem Solving – Measure Capacity 1

7a. Match the containers to their capacity.

A B C D



24l

48ml

350ml

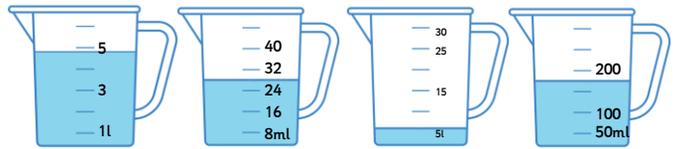
700ml



PS

7b. Match the containers to their capacity.

A B C D



48ml

30l

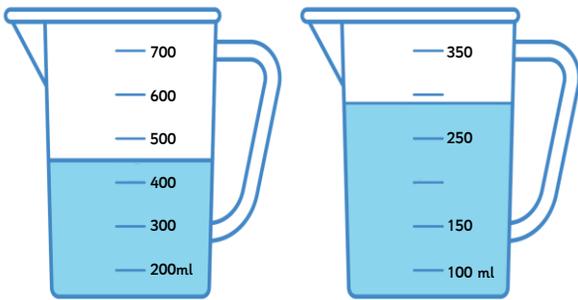
300ml

600ml



PS

8a. Lucia has more than 250ml but less than 300ml of water in her container.



A

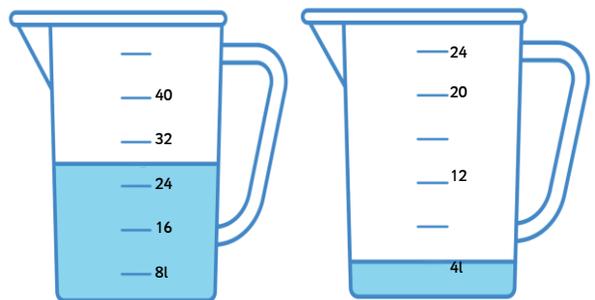
B

Which container belongs to Lucia?



PS

8b. Rob has more than 4l but less than 32l of water in his container.



A

B

Which container belongs to Rob?

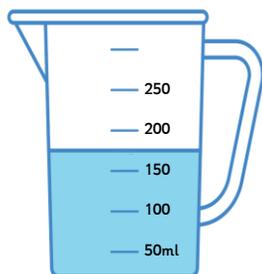


PS

9a. Leo is working out how much water is in the jug.



There are 175ml.



Is Leo correct? Explain why.

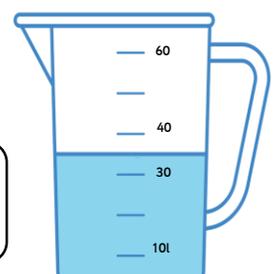


R

9b. Sammy is working out how much water is in the jug.



There are 60ml.



Is Sammy correct? Explain why.



R

# Reasoning and Problem Solving – Measure Capacity 1

## Developing

- 1a. **A – 60ml; B – 6ml**
- 1b. **A – 70ml; B – 6ml**
- 2a. **A**
- 2b. **B**
- 3a. **Yes. The liquid reaches the 27ml line.**
- 3b. **Yes. The liquid reaches the 35ml line.**

## Expected

- 4a. **A – 24ml; B – 600ml; C – 300ml**
- 4b. **A – 50ml; B – 700ml; C – 300ml**
- 5a. **A**
- 5b. **A**
- 6a. **Yes. The liquid is between 150ml and 200ml.**
- 6b. **No. The liquid does not reach 500ml.**

## Greater Depth

- 7a. **A – 350ml; B – 24l; C – 48ml; D – 700ml**
- 7b. **A – 600ml; B – 48ml; C – 30l; D – 300ml**
- 8a. **B**
- 8b. **B**
- 9a. **Yes. The liquid is between 150ml and 200ml.**
- 9b. **No. The scale is measured in l not ml.**