

# 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 (Reasoning)

**Developing** Finding the odd one out. 3 containers with scales that increase by 1 or 100. All increments labelled and all answers on labelled increments.

**Expected** Finding the odd one out. 3 containers with scales that increase by 1, 50 or 100. Some scales with every other increment labelled.

**Greater Depth** Finding the odd one out. 3 containers with scales that increase by 1, 2, 50, 100 or 200. Most increments are unlabelled on the scales, and some measurements may fall in between increments.

Questions 2, 5 and 8 (Problem Solving)

**Developing** Working out 3 possibilities for volumes of liquid from given statements and marking these on scales. Scales increase by 1 or 100. All increments labelled and all answers on labelled increments.

**Expected** Working out 3 possibilities for volumes of liquid from given statements and marking these on scales. Scales increase by 1, 50 or 100. Some scales with every other increment labelled.

**Greater Depth** Working out 3 possibilities for volumes of liquid from given statements and marking these on scales. Scales increase by 1, 2, 50, 100 or 200. Most increments are unlabelled on the scales, and some measurements may fall in between increments.

Questions 3, 6 and 9 (Reasoning)

**Developing** Deciding whether a given statement about the volume of a liquid is correct. Scales increase by 1 or 100. All increments labelled and all answers on labelled increments.

**Expected** Deciding whether a given statement about the volume of a liquid is correct. Scales increase by 1, 50 or 100. Some scales with every other increment labelled.

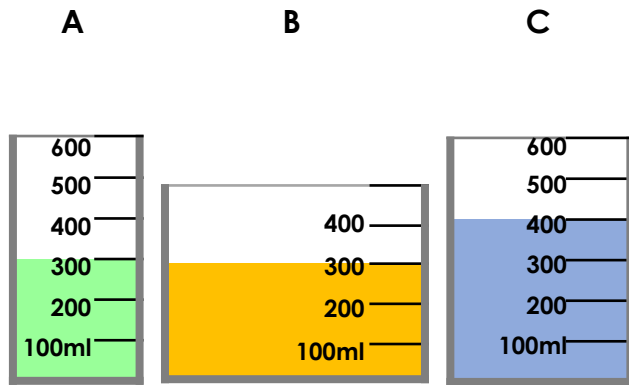
**Greater Depth** Deciding whether a given statement about the volume of a liquid is correct. Scales increase by 1, 2, 50, 100 or 200. Most increments are unlabelled on the scales, and some measurements may fall in between increments.

More [Year 3 and Year 4 Mass and Capacity](#) resources.

Did you like this resource? Don't forget to [review](#) it on our website.

# Measure Capacity 1

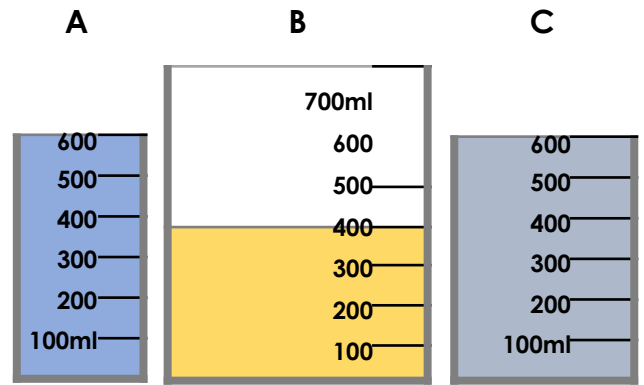
1a. Which is the odd one out? Explain your answer.



3 R

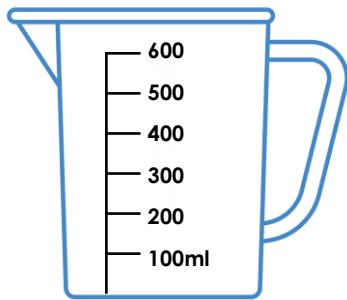
# Measure Capacity 1

1b. Which is the odd one out? Explain your answer.



3 R

2a. Henry has poured water into the measuring jug below. The volume is more than 200ml but less than 600ml.

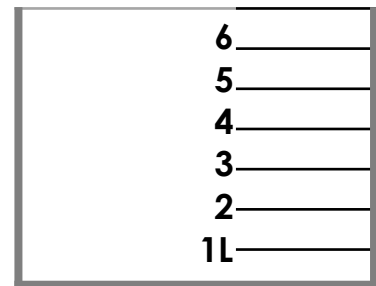


How much water could he have?  
Use arrows to label 3 possible answers.



3 PS

2b. Kay has poured water into the container below. The volume is more than 1L but less than 5L.



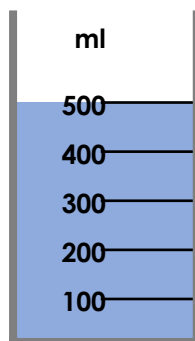
How much water could she have?  
Use arrows to label 3 possible answers.



3 PS

3a. Is Ross correct? Explain your answer.

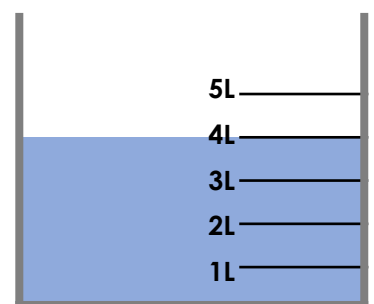
I have 50ml of water in my container.



3 R

3b. Is Ciara correct? Explain your answer.

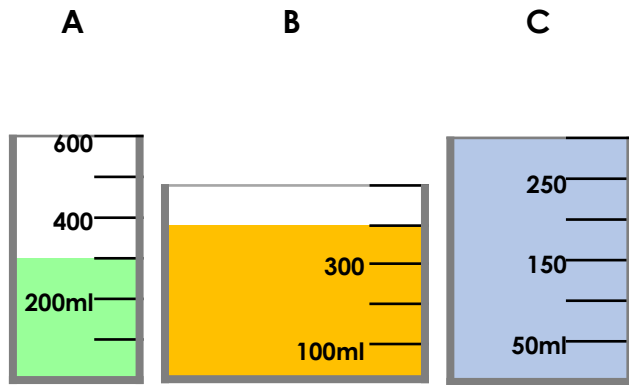
I have 4L of water in my container.



3 R

# Measure Capacity 1

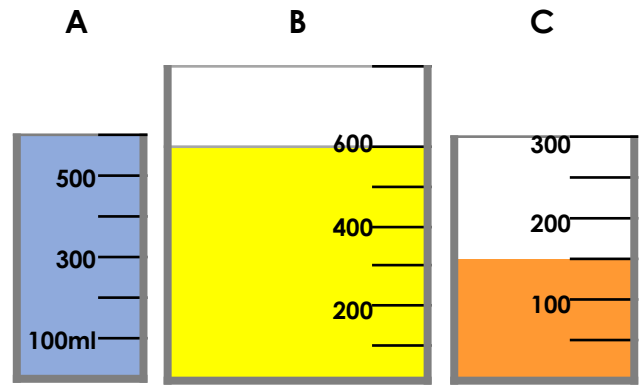
4a. Which is the odd one out? Explain your answer.



3 R

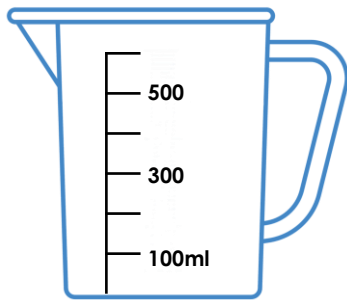
# Measure Capacity 1

4b. Which is the odd one out? Explain your answer.



3 R

5a. Lewis has poured water into the measuring jug below. The volume is more than 100ml but less than 500ml.

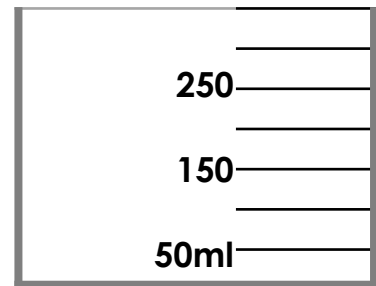


How much water could he have?  
Use arrows to label 3 possible answers.



3 PS

5b. Sadia has poured water into the container below. The volume is more than 50ml but less than 300ml.



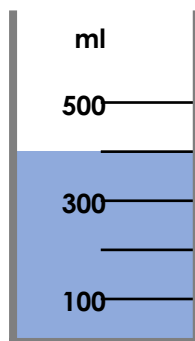
How much water could she have?  
Use arrows to label 3 possible answers.



3 PS

6a. Is Lu correct? Explain your answer.

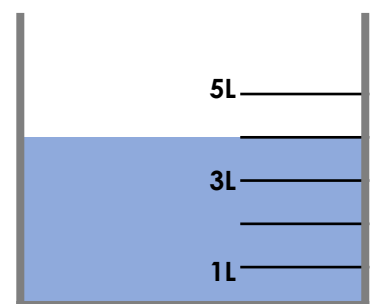
I have 350ml of liquid in my container.



3 R

6b. Is Dani correct? Explain your answer.

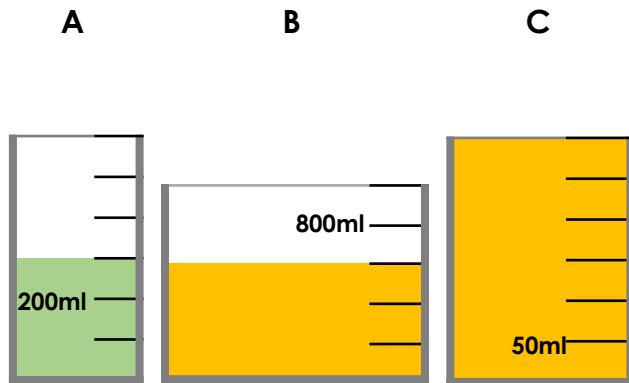
I have 6L of liquid in my container.



3 R

# Measure Capacity 1

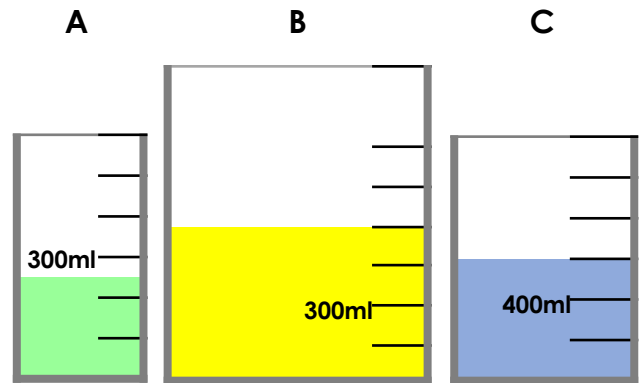
7a. Which is the odd one out? Explain your answer.



3 R

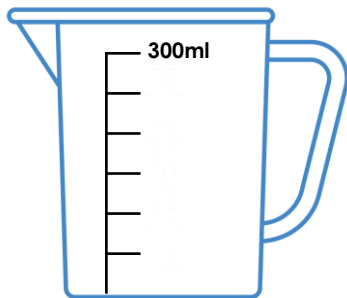
# Measure Capacity 1

7b. Which is the odd one out? Explain your answer.



3 R

8a. Lucia has poured water into the measuring jug below. The volume is more than 100ml but less than 300ml.

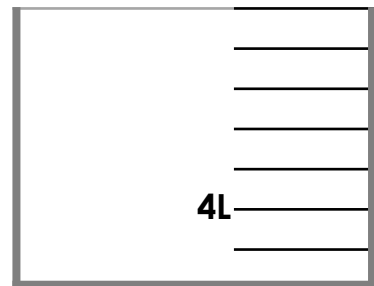


How much water could she have? Use arrows to label 3 possible answers.



3 PS

8b. Rob has poured water into the container below. The volume is more than 2L but less than 8L.



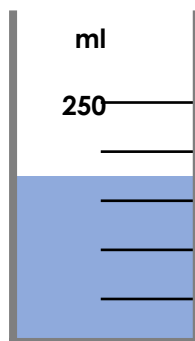
How much water could he have? Use arrows to label 3 possible answers.



3 PS

9a. Is Leo correct? Explain your answer.

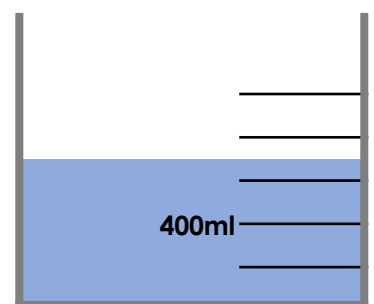
I have 175ml of liquid in my container.



3 R

9b. Is Sammy correct? Explain your answer.

I have 800ml of liquid in my container.



3 R

## Reasoning and Problem Solving Measure Capacity 1

### Developing

1a. C is the odd one out. The capacities of A and B are both 300ml but the capacity of C is 400ml.

2a. Various possible answers, for example: 300ml, 400ml, 500ml.

The 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> increments from the bottom labelled.

3a. Ross is not correct.

The scale is in increments of 100ml so the volume of liquid is 500ml.

### Expected

4a. B is the odd one out. The volumes of liquid in A and C are both 300ml but the volume in B is 400ml.

5a. Various possible answers, for example: 200ml, 300ml, 400ml.

The 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> increments from the bottom labelled.

6a. Lu is not correct.

The scale is increments of 100ml. The water level is half way between 300ml and 500ml so the volume is 400ml.

### Greater Depth

7a. B is the odd one out. The volumes of liquid in A and C are both 300ml but the volume in B is 600ml.

8a. Various possible answers, for example: 150ml, 200ml, 150ml.

The 3<sup>rd</sup>, 4<sup>th</sup> and 5<sup>th</sup> increments from the bottom labelled.

9a. Leo is correct.

The scale is increments of 50ml. The water level is half way between 150ml and 200ml so the volume is 175ml.

## Reasoning and Problem Solving Measure Capacity 1

### Developing

1b. B is the odd one out. The volumes of liquid in A and C are both 600ml but the volume in B is 400ml.

2b. Various possible answers, for example: 2L, 3L, 4L.

The 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> increments from the bottom labelled.

3b. Ciara is correct. The scale is in increments of 1L so the volume of liquid is 4L.

### Expected

4b. C is the odd one out. The volumes of liquid in A and B are both 600ml but the volume in C is 150ml.

5b. Various possible answers, for example: 100ml, 150ml, 200ml.

The 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> increments from the bottom labelled.

6b. Dani is not correct.

The scale is increments of 1L. The water level is half way between 3L and 5L so the volume is 4L.

### Greater Depth

7b. A is the odd one out. The volumes of liquid in B and C are both 600ml but the volume in A is 250ml.

8b. Various possible answers, for example: 4L, 6L, 7L.

The 2<sup>nd</sup>, 3<sup>rd</sup> and midway between the 3<sup>rd</sup> and 4<sup>th</sup> increments from the bottom labelled.

9b. Sammy is not correct.

The scale is increments of 200ml. The water level is half way between 600ml and 800ml so the volume is 700ml.