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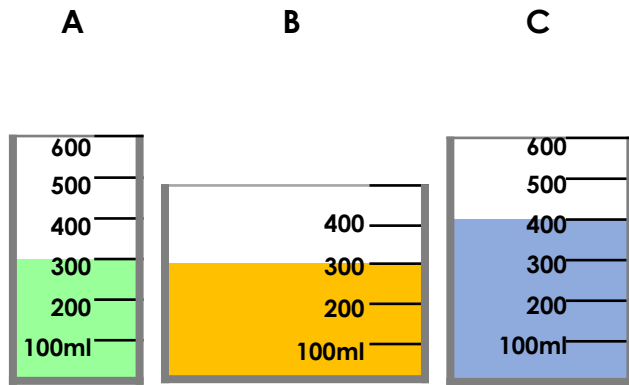Greater Depth Deciding whether a given statement about the volume of a liquid is correct. Scales increase by 1, 2, 50, 100 or 200. Most increments are unlabelled on the scales, and some measurements may fall in between increments.

More Year 3 and Year 4 Mass and Capacity resources.

Did you like this resource? Don't forget to review it on our website.

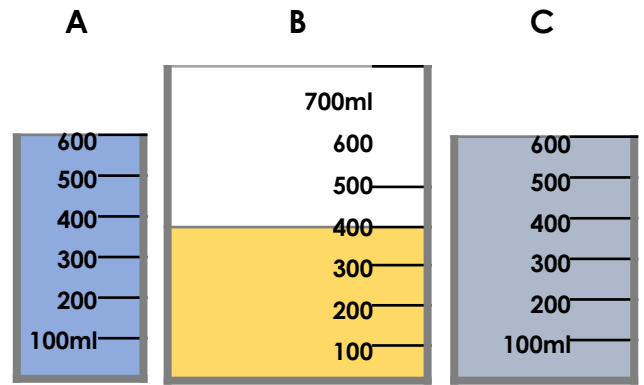**1a. Which is the odd one out? Explain your answer.**

A   B   C

600
500
400   400   600
300   300   500
200   200   400
100ml   100ml   300
200
100ml

D   3 R

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

A   B   C

700ml
600   600   600
500   500   500
400   400   400
300   300   300
200   200   200
100ml   100   100ml

D   3 R

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

600
500
400
300
200
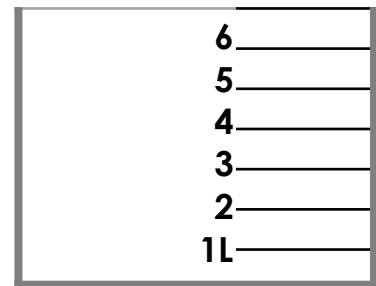100ml
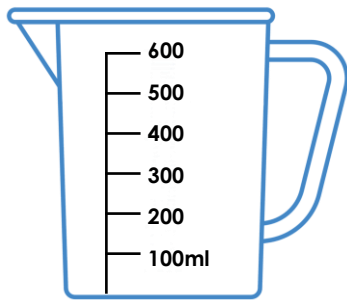
How much water could he have?
Use arrows to label 3 possible answers.

D   3 PS

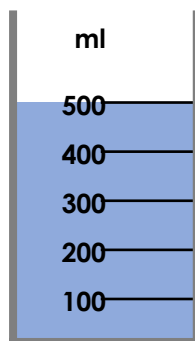**2b. Kay has poured water into the container below. The volume is more than 1L but less than 5L.**

6
5
4
3
2
1L

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

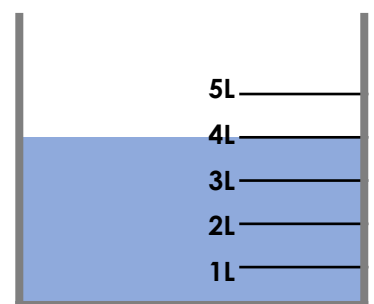D   3 PS

3a. Is Ross correct? Explain your answer.

I have 50ml of
water in my
container.

ml

500
400
300
200
100

D   3 R

3b. Is Ciara correct? Explain your answer.

I have 4L of
water in my
container.

5L
4L
3L
2L
1L

D   3 R
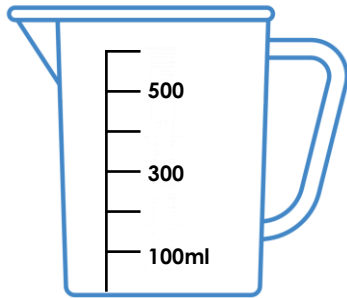
4a. Which is the odd one out? Explain your answer.

A   B   C

600

400

200ml

300

100ml

250

150

50ml

E   3 R

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

A   B   C

500

300

100ml

600

400

200

300

200

100
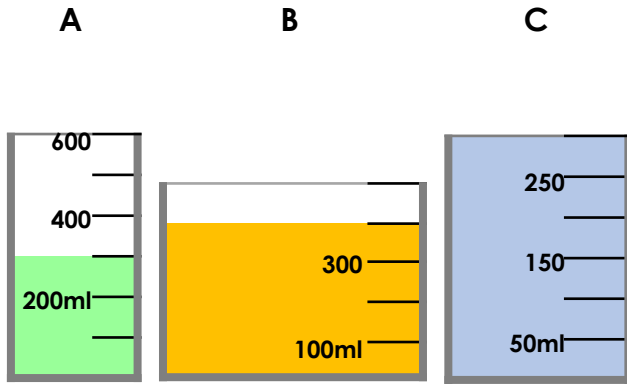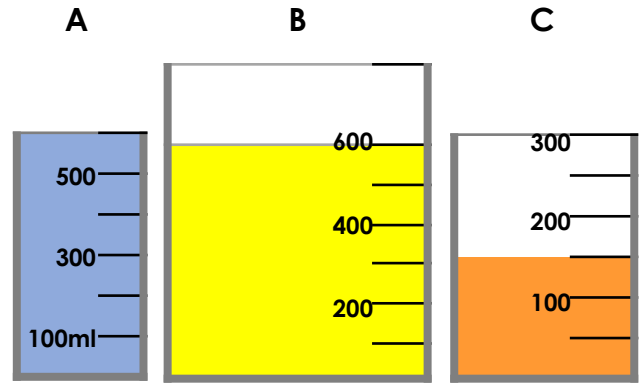
E   3 R

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

500

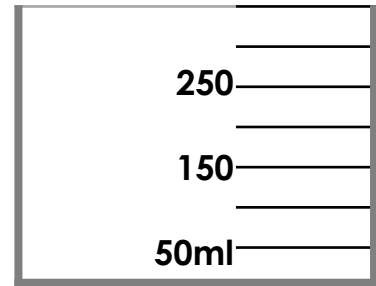300

100ml

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

E   3 PS

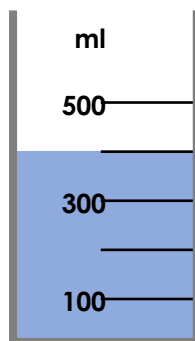**5b. Sadia has poured water into the container below. The volume is more than 50ml but less than 300ml.**

250

150

50ml

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

E   3 PS

6a. Is Lu correct? Explain your answer.

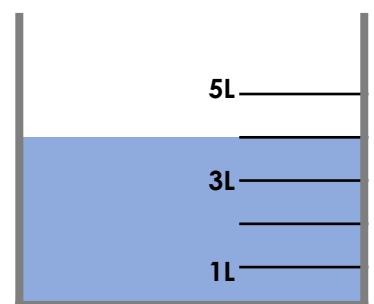I have 350ml of liquid in my container.

ml

500

300

100

E   3 R

6b. Is Dani correct? Explain your answer.

I have 6L of liquid in my container.

5L

3L

1L

E   3 R

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Reasoning and Problem Solving – Measure Capacity 1 – Year 3 Expected

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

A   B   C

200ml

800ml

50ml

GD   3 R
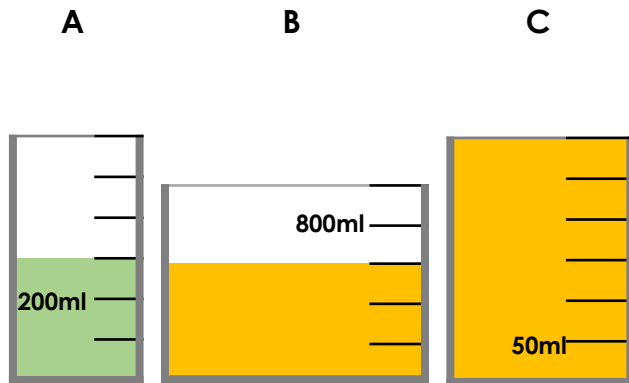
7b. Which is the odd one out? Explain your answer.

A   B   C

300ml

300ml

400ml
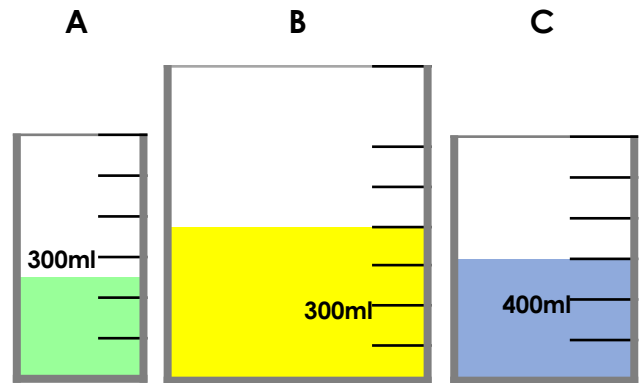
GD   3 R

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

300ml

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

GD   3 PS

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

4L

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

GD   3 PS

9a. Is Leo correct? Explain your answer.

I have 175ml of liquid in my container.

ml

250

GD   3 R

9b. Is Sammy correct? Explain your answer.

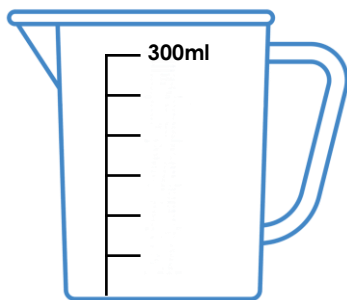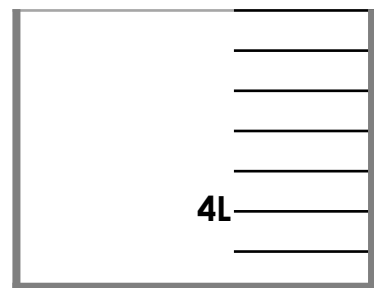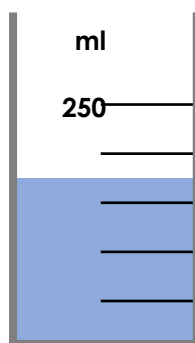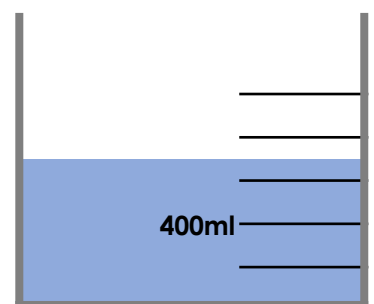I have 800ml of liquid in my container.

400ml

GD   3 R

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Reasoning and Problem Solving – Measure Capacity 1 – Year 3 Greater Depth

Reasoning and Problem Solving
Measure Capacity 1

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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 3rd, 4th and 5th increments from the bottom labelled.
3a. Ross is not correct.
The scale is in increments of 100ml so the volume of liquid is 500ml.

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 2nd, 3rd and 4th increments from the bottom labelled.
3b. Ciara is correct. The scale is in increments of 1L so the volume of liquid is 4L.

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 2nd, 3rd and 4th 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.

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 2nd, 3rd and 4th 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
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 3rd, 4th and 5th 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.

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 2nd, 3rd and midway between the 3rd and 4th 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.

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