Reasoning and Problem Solving
Step 6: Litres

National Curriculum Objectives:

Mathematics Year 2: (2M1) Compare and order lengths, mass, volume/capacity and record the results using >, < and =
Mathematics Year 2: (2M2) 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

Differentiation:

Questions 1, 4 and 7 (Problem Solving)
Developing Identify and explain who has accurately understood the volume within the container using whole litres on a single litre scale, up to 10 litres.
Expected Identify and explain who has accurately understood the volume within the container using whole litres in increments of 1 or 2 litres with some missing increments, up to 20 litres.
Greater Depth Identify and explain who has accurately understood the volume within the container using whole and half litres in increments of 1 or 2 litres with some increments missing and some measurements falling between increments, up to 20 litres.

Questions 2, 5 and 8 (Reasoning)
Developing Find combinations of containers which can be filled using the given volume. Question uses whole litres on a single litre scale, up to 10 litres.
Expected Find combinations of containers which can be filled using the given volume. Question uses whole litres in increments of 1 or 2 litres with some increments missing, up to 20 litres.
Greater Depth Find combinations of containers which can be filled using the given volume. Question uses whole and half litres in increments of 1 or 2 litres with some increments missing and some measurements falling between increments, up to 20 litres.

Questions 3, 6 and 9 (Reasoning)
Developing Decide and explain if there is a great enough volume in the given container. Question uses whole litres on a single litre scale, up to 10 litres.
Expected Decide and explain if there is a great enough volume in the given container. Question uses whole litres in increments of 1 or 2 litres with some increments missing, up to 20 litres.
Greater Depth Decide and explain if there is a great enough volume in the given container. Question uses whole and half litres in increments of 1 or 2 litres with some increments missing and some measurements falling between increments, up to 20 litres.

More Year 2 Mass Capacity and Temperature resources.

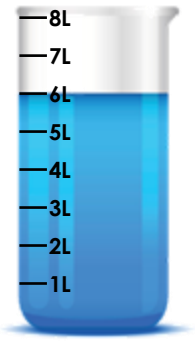
Did you like this resource? Don't forget to review it on our website.

Litres

1a. Jerry and Chen are discussing volume.

Jerry: The volume of liquid in this container is 6 litres.

Chen: The volume of liquid in this container is 7 litres.



Who is correct? Explain your answer.

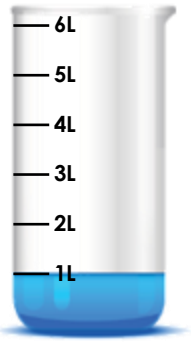
D R

Litres

1b. Aisha and Freya are discussing volume.

Aisha: The volume of liquid in this container is 11 litres.

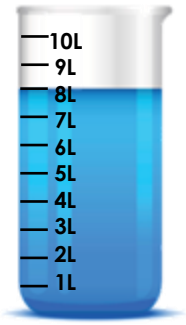
Freya: The volume of liquid in this container is 1 litre.

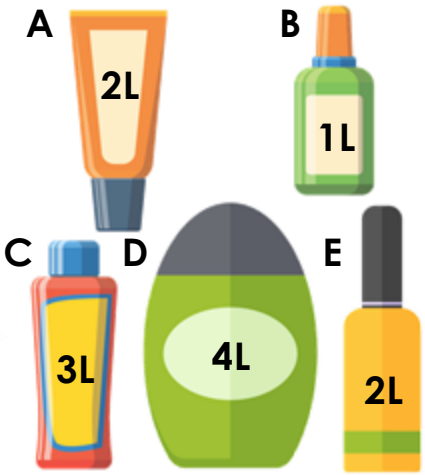


Who is correct? Explain your answer.

D R

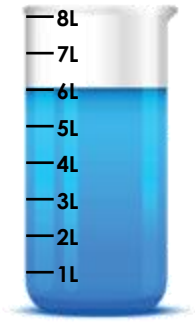
2a. Which combination of bottles and tubes could be filled using the amount of liquid shown in the container below?

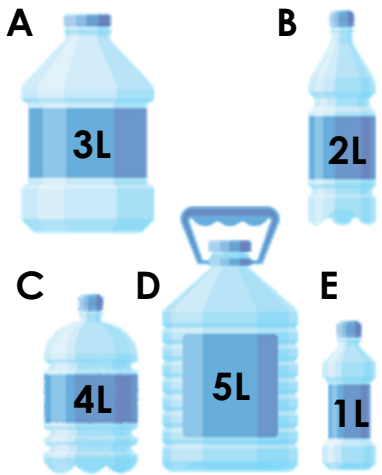




D PS

2b. Which combination of bottles could be filled using the amount of liquid shown in the container below?

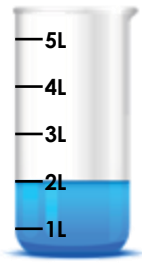




D PS

3a. Aisha wants to make juice for a party.

I need 3 litres of water to make enough juice.

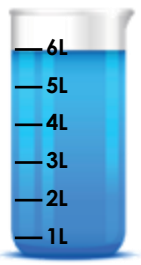


Does she have enough water? Explain your answer.

D R

3b. Indie wants to fill up her fish tank.

I need 6 litres of water to fill up my fish tank.

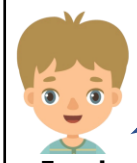


Does she have enough water? Explain your answer.

D R

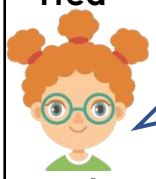
Litres

4a. Fred and Kate are discussing volume.



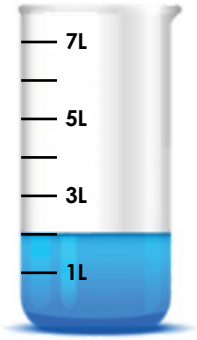
Fred

The volume of liquid in this container is 1 litre.



Kate

The volume of liquid in this container is 2 litres.



Who is correct? Explain your answer.

E

R

Litres

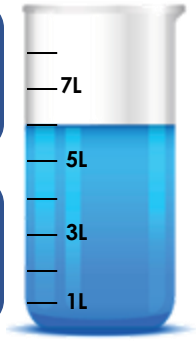
4b. Sid and Fiona are discussing volume.

Sid

The volume of liquid in this container is 6 litres.

Fiona

The volume of liquid in this container is 8 litres.

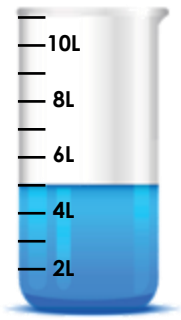


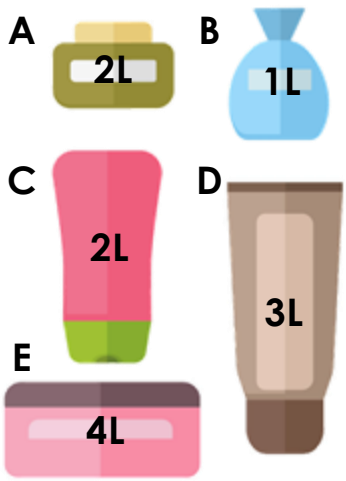
Who is correct? Explain your answer.

E

R

5a. Which combination of bottles and jars could be filled using the amount of liquid shown in the container below?

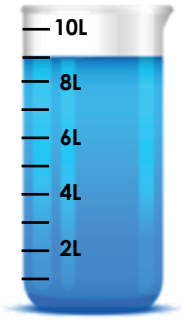




E

PS

5b. Which combination of vases could be filled using the amount of liquid shown in the container below?

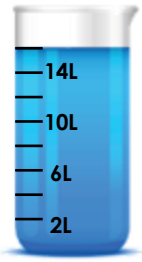


E

PS

6a. Sid wants to water his plants.

I need 18 litres of water to water my plants.



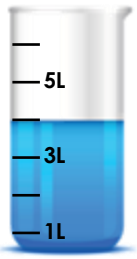
Does he have enough water? Explain your answer.

E

R

6b. Kate wants to go for a bike ride.

I need 2 litres of water to take on my bike ride.



Does she have enough water? Explain your answer.

E

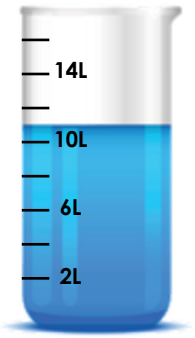
R

Litres

7a. Joe and Lee are discussing volume.

Joe: The volume of liquid in this container is 12 litres.

Lee: The volume of liquid in this container is 11 litres.



Who is correct? Explain your answer.

GD

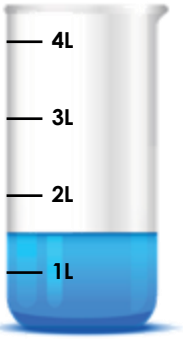
R

Litres

7b. Phil and Indie are discussing volume.

Phil: The volume of liquid in this container is 2 litres.

Indie: The volume of liquid in this container is $1\frac{1}{2}$ litres.

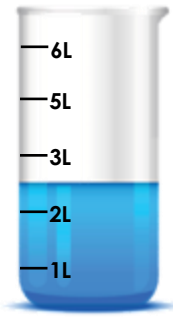


Who is correct? Explain your answer.

GD

R

8a. Which combination of pots could be filled using the amount of liquid shown in the container below?



A $1\frac{1}{2}$L

B 1L

C $\frac{1}{2}$L

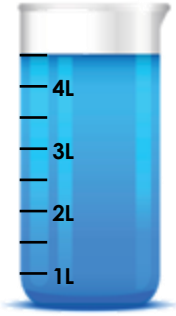
D $2\frac{1}{2}$L

E 2L

GD

PS

8b. Which combination of watering cans could be filled using the amount of liquid shown in the container below?



A 2L

B $1\frac{1}{2}$L

C 4L

D 1L

E $\frac{1}{2}$L

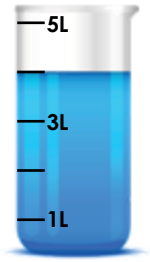
F 2L

GD

PS

9a. Tim wants to fill water balloons.

I need $4\frac{1}{2}$ litres of water to fill my balloons.



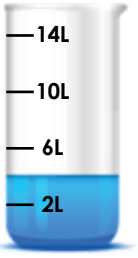
Does he have enough water? Explain your answer.

GD

R

9b. Flo wants to make soup.

I need 4 litres of water to make my soup.



Does she have enough water? Explain your answer.

GD

R

Reasoning and Problem Solving
Litres

Developing

1a. Jerry is correct as the liquid reaches 6L on the container scale.

2a. Possible combinations: A,D,E; B,C,D; A,B,C,E

3a. Aisha does not have enough water to make the juice for her party as the water only reaches 2L on the container and Aisha needs 3 litres.

Expected

4a. Kate is correct as the scale is going up in increments of 1 litre and the liquid is between 1L and 3L on the container so the volume is 2 litres.

5a. Possible combinations: A,B,C; B,E; A,D; C,D

6a. Sid does not have enough water to water his plants as the liquid only reaches 16L on the container so Sid needs 2 more litres of water.

Greater Depth

7a. Lee is correct as the liquid is half way between the 10L increment and the next (12L) which is 11L.

8a. Possible combinations: A,B; D; C,E

9a. Tim does not have enough water to fill his water balloons as the scale is going up in increments of 2 so the increment between 3L and 5L is 4L. Tim needs $4\frac{1}{2}$ litres to fill his balloons so he needs another $\frac{1}{2}$ litre.

Reasoning and Problem Solving
Litres

Developing

1b. Freya is correct as the liquid reaches 1L on the container scale.

2b. Possible combinations are: A,B,E; B,C; D,E

3b. Indie has got enough water to fill her fish tank as the water reaches 6L on the container scale.

Expected

4b. Sid is correct as the scale on the container is going up in increments of 2 litres and the liquid is between 5L and 7L so the volume is 6 litres.

5b. Possible combinations: A,E; C,D,E; A,B,C

6b. Kate has more than enough water to take on her bike ride as the scale is going up in increments of 1 so the increment between 3L and 5L is 4L.

Greater Depth

7b. Indie is correct as the scale on the container is going up in increments of 1 so the increment between 1 and 2 is $1\frac{1}{2}$ litres.

8b. Possible combinations: A,F,E; C,E; A,B,D; B,D,F

9b. Flo has the right amount of water to make her soup as the water is exactly half way between 2L and 6L on the container which is 4L.