

# Reasoning and Problem Solving

## Step 4: Compare Capacity

### National Curriculum Objectives:

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

### Differentiation:

Questions 1, 4 and 7 (Reasoning)

**Developing** Explain which container has the largest capacity by counting the number of glasses it can fill. Whole measurements only.

**Expected** Explain which container has the largest capacity by counting the number of glasses it can fill. Whole and half measurements.

**Greater Depth** Explain which container has the largest capacity by counting the number of glasses it can fill. Whole, half, quarter and three-quarter measurements.

Questions 2, 5 and 8 (Problem Solving)

**Developing** Compare the volume of containers using more, less or equal. All containers are the same and use the same volume.

**Expected** Compare the volume of containers using  $<$ ,  $>$  and  $=$  where one container is used to establish to capacity of other containers. Full and half measures included.

**Greater Depth** Compare the volume of containers using  $<$ ,  $>$  and  $=$  where one container is used to establish to capacity of other containers. Full, half and quarter measures included.

Questions 3, 6 and 9 (Reasoning)

**Developing** Determine whether a statement about comparing capacity is correct based on information given.

**Expected** Determine whether a statement about comparing capacity is correct based on information given.

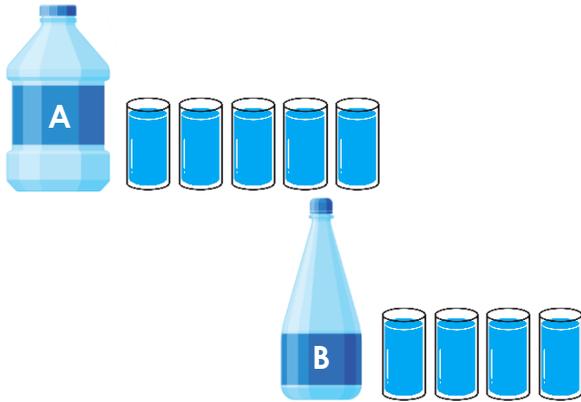
**Greater Depth** Determine whether a statement about comparing capacity is correct based on information given. Includes half and quarter measures.

More [Year 2 Mass Capacity and Temperature](#) resources.

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

## Compare Capacity

1a. Which container has the largest capacity?



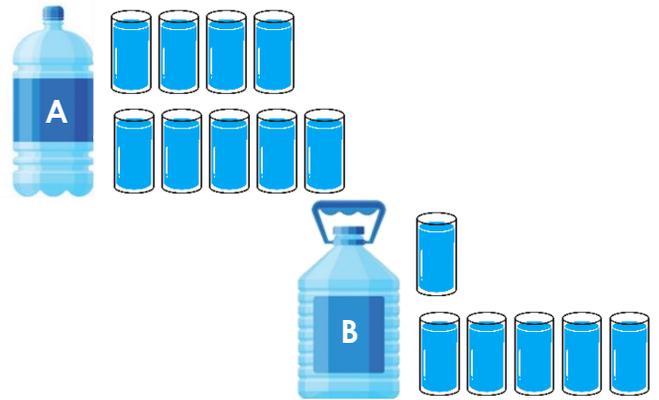
How do you know?



R

## Compare Capacity

1b. Which container has the largest capacity?



How do you know?

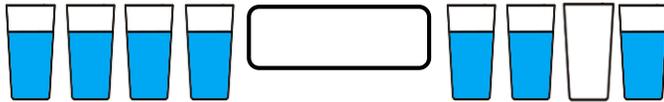
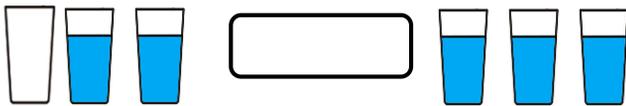


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2a. Use the words more, less or equal, to compare the volume of column A with column B.

A

B

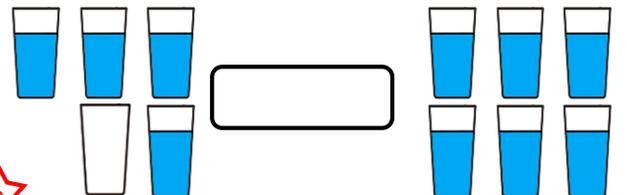
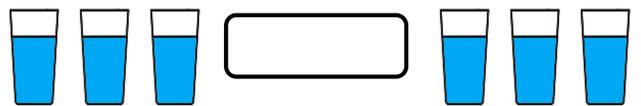


PS

2b. Use the words more, less or equal, to compare the volume of column A with column B.

A

B



PS

3a. Jackson knows it takes 5 glasses of water to fill a jug. He knows it takes 10 glasses of water to fill a bucket.



I think that the capacity of the jug is greater than the capacity of the bucket.

Is he correct? Explain your answer.



R

3b. Shelley knows it takes 10 buckets to fill a bath. She knows it takes 13 buckets to fill a paddling pool.



I think that the capacity of the paddling pool is greater than the capacity of the bath.

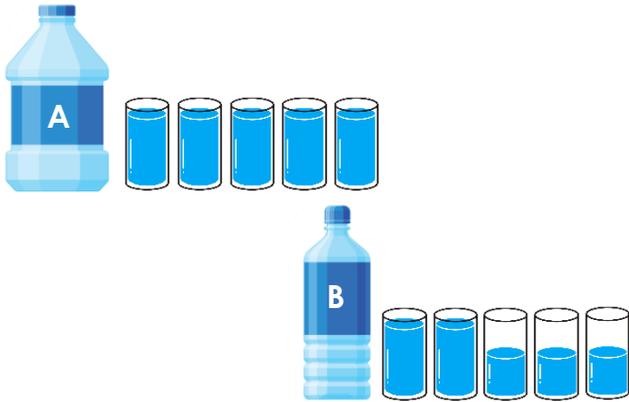
Is she correct? Explain your answer.



R

## Compare Capacity

4a. Which container has the largest capacity?



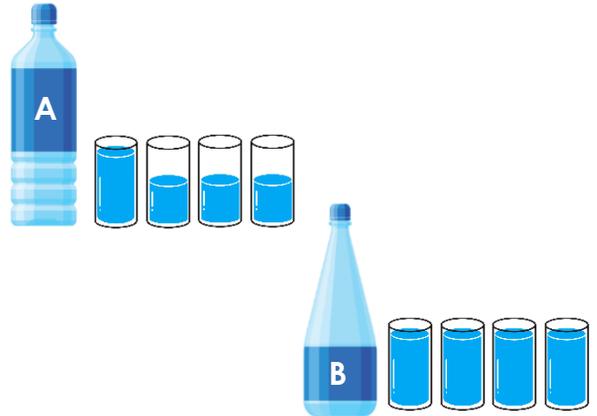
How do you know?



R

## Compare Capacity

4b. Which container has the largest capacity?

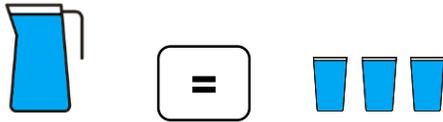


How do you know?

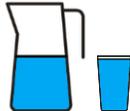
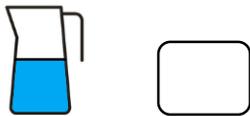


R

5a. Look at the comparison below.

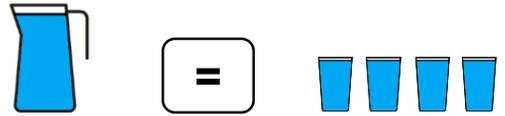


Complete these statements using  $<$ ,  $>$  and  $=$  symbols.

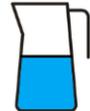
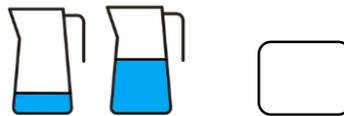


PS

5b. Look at the comparison below.



Complete these statements using  $<$ ,  $>$  and  $=$  symbols.



PS

6a. Jacinta knows that 12 glasses of water will fill 1 bucket or 2 jugs.



I think that the capacity of the bucket is greater than the capacity of the jug.

Is she correct? Explain your answer.



R

6b. Peter knows that 15 glasses of water fills three jugs or half a saucepan.



I think that the capacity of the jug is less than the capacity of the saucepan.

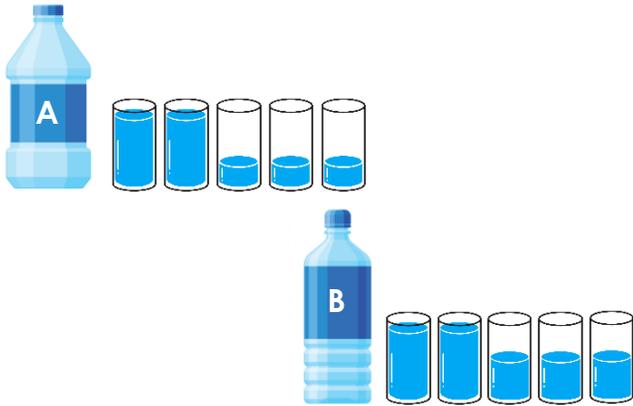
Is he correct? Explain your answer.



R

## Compare Capacity

7a. Which container has the largest capacity?



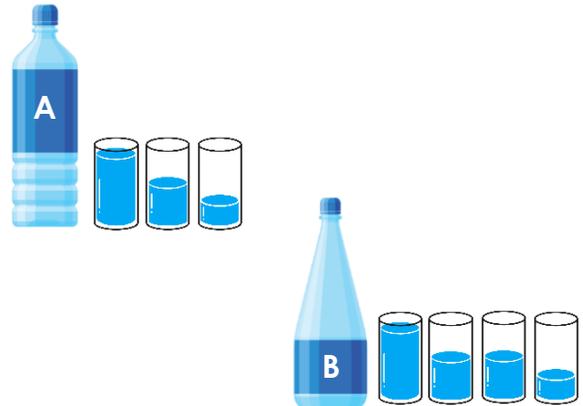
How do you know?



R

## Compare Capacity

7b. Which container has the largest capacity?

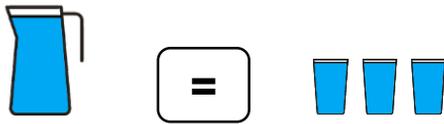


How do you know?

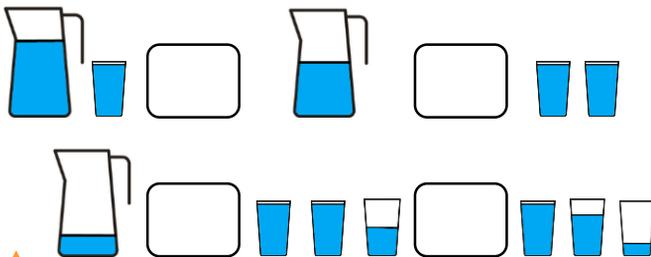


R

8a. Look at the comparison below.

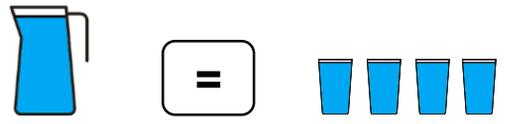


Complete these statements using  $<$ ,  $>$  and  $=$  symbols.

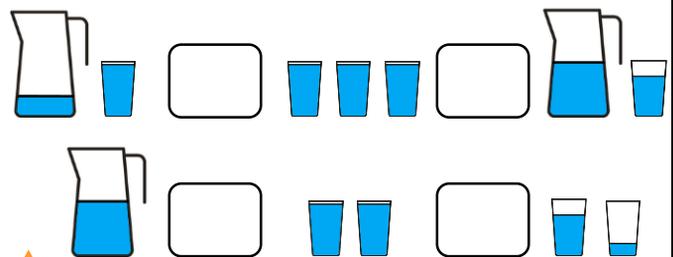


PS

8b. Look at the comparison below.



Complete these statements using  $<$ ,  $>$  and  $=$  symbols.



PS

9a. Grace knows that 34 buckets of water will fill one paddling pool or three-quarters of a pond.



I think that the capacity of the pond is less than the capacity of the paddling pool.

Is she correct? Explain your answer.



R

9b. Sajid knows that 15 jugs of water will fill half a kitchen sink or 5 buckets.



I think that the capacity of the kitchen sink is greater than the capacity of the bucket.

Is he correct? Explain your answer.



R

## Reasoning and Problem Solving Compare Capacity

### Developing

- 1a. A because the container holds 5 full glasses. B only holds 4 full glasses.  
2a. A is less than B, A is more than B.  
3a. Jackson is not correct because the jug only takes 5 glasses to fill, the bucket takes 10 glasses.

### Expected

- 4a. A because the container holds 5 full glasses. B only holds 3 full glasses and 1 half full.  
5a.  $<$ ,  $>$   
6a. Jacinta is correct because with the same amount of water, more jugs than buckets can be filled so the jugs must have a smaller capacity.

### Greater Depth

- 7a. B because the container holds 3 full glasses and 1 half full glass. A only holds 2 full glasses and 3 quarter full glasses.  
8a.  $>$   $<$ ,  $<$   $>$   
9a. Grace is incorrect because with the same amount of water, the pond is only three-quarters full but the paddling pool is full so the pond must have a larger capacity than the paddling pool.

## Reasoning and Problem Solving Compare Capacity

### Developing

- 1b. A because the container holds 9 full glasses. B only holds 6 full glasses.  
2b. A is equal to B, A is less than B.  
3b. Shelley is correct because it takes 3 buckets more to fill the paddling pool.

### Expected

- 4b. B because the container holds 4 full glasses. A only holds 2 full glasses and 1 half full glass.  
5b.  $>$ ,  $=$   
6b. Peter is correct because with the same amount of water, fills more jugs than saucepans can be filled so the saucepan must have a larger capacity.

### Greater Depth

- 7b. B because the container holds 2 full glasses and 1 quarter full glass. A only holds 2 full glasses.  
8b.  $<$   $>$ ,  $=$   $>$   
9b. Sajid is correct because with the same amount of water, 5 buckets can be filled but only have of the kitchen sink so the sink must have a larger capacity.