Reasoning and Problem Solving
Step 6: Compare Capacity

National Curriculum Objectives:

Mathematics Year 1: (1M1) Compare, describe and solve practical problems for: capacity and volume [for example, full/empty, more than, less than, half, half full, quarter]

Mathematics Year 1: (1M2) Measure and begin to record: capacity and volume

Differentiation:

Questions 1, 4 and 7 (Problem Solving)
Developing Use the exchange rate (between container types) given to order three sets of containers by volume. Comparisons are made between groups of single container types.
Expected Use the exchange rate (between container types) given to order three sets of containers by volume. Comparisons are made between groups of mixed container types.
Greater Depth Use the exchange rate (between container types) given to order three sets of containers by volume. Comparisons are made between groups of mixed container types (including empty containers), shown by descriptions and/or images.

Questions 2, 5 and 8 (Problem Solving)
Developing Use the exchange rate (between container types) given to find how many containers are required to solve a problem. Comparisons are made between groups of single container types.
Expected Use the exchange rate (between container types) given to find how many containers are required to solve a problem. Comparisons are made between groups of mixed container types.
Greater Depth Use the exchange rate (between container types) given to find how many containers are required to solve a problem. Comparisons are made between groups of mixed container types, shown by descriptions and/or images.

Questions 3, 6 and 9 (Reasoning)
Developing Tick the correct reasoning used in a capacity or volume comparison. Comparisons are made between groups of single container types.
Expected Tick the correct reasoning used in a capacity or volume comparison. Comparisons are made between groups of mixed container types.
Greater Depth Complete the reasoning stem sentence used in a capacity or volume comparison. Comparisons are made between groups of mixed container types, shown by descriptions and/or images.
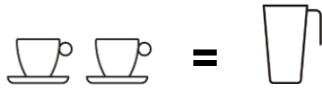
More Year 1 Weight and Volume resources.

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

Compare Capacity

Compare Capacity

1a. Put the groups in order from smallest volume to largest volume, if:
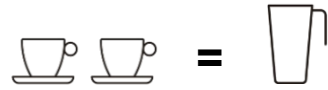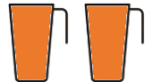
☕ ☕ = 🫗

A. ☕ ☕

B. 🫗 🫗

C. ☕

PS

1b. Put the groups in order from largest volume to smallest volume, if:

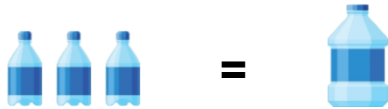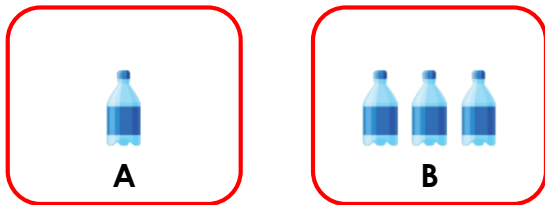☕ ☕ = 🫗

A. 🫗

B. ☕

C. 🫗 🫗

PS

2a. Look at the comparison below:

🍶🍶🍶 = 🍶

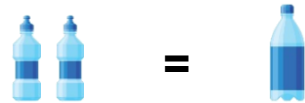Group A must have an equal capacity to group B.

A   B

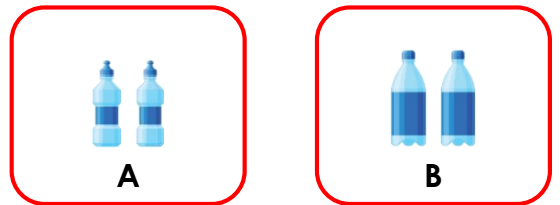What bottles could be added to group A?

PS

2b. Look at the comparison below:

🍶🍶 = 🍶

Group A must have an equal capacity to group B.

A   B

What bottles could be added to group A?

PS

3a. Tick the reasoning which is correct.
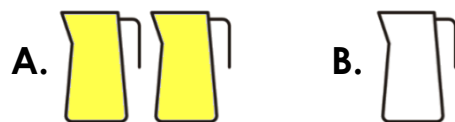
A. 🫙   B. 🫙🫙

Group B has a larger capacity because it has a large container. ☐

Group B has a larger capacity because it has more containers. ☐

R

3b. Tick the reasoning which is correct.

A. 🫗🫗   B. 🫗

Group B has a smaller volume because it only has one container. ☐

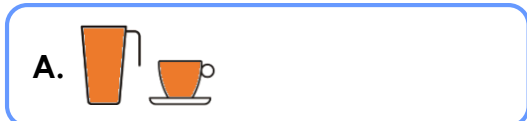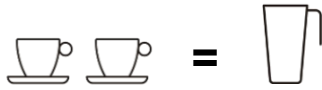Group B has a smaller volume because its container is empty. ☐

R

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Reasoning and Problem Solving – Compare Capacity – Year 1 Developing

4a. Put the groups in order from largest volume to smallest volume, if:

☕ ☕ = 🥤

A. 🥤 ☕

B. ☕ ☕ ☕ ☕ ☕

C. 🥤 🥤 ☕

E   PS

4b. Put the groups in order from smallest volume to largest volume, if:

☕ ☕ = 🥤

A. 🥤 ☕

B. ☕ ☕ ☕ ☕

C. 🥤 ☕

E   PS

5a. Look at the comparison below:
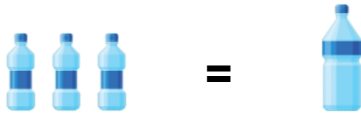
🍶🍶🍶 = 🍶

Group A must have an equal capacity to group B.

A   B
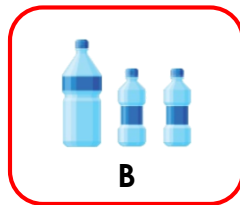
What bottles could be added to group B?

E   PS

5b. Look at the comparison below:

🍶🍶🍶🍶 = 🍶

Group A must have an equal capacity to group B.

A   B

What bottles could be added to group A?

E   PS

6a. Tick the reasoning which is correct.

A. 🏺🔶   B. 🔶🔶🔶
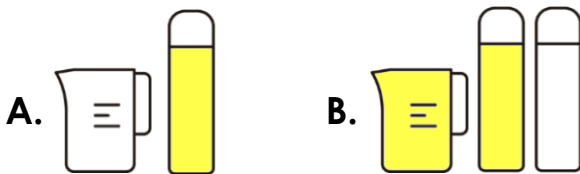
Group A has a smaller volume because it has fewer full containers. ☐

Group A has a smaller volume because it has fewer containers. ☐

E   R

6b. Tick the reasoning which is correct.

A. 🍾🍾🍾   B. 🍾🍾🍾

The groups have equal capacity because the containers are empty. ☐

The groups have equal capacity because they have the same containers. ☐

E   R

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Reasoning and Problem Solving – Compare Capacity – Year 1 Expected

Compare Capacity

7a. Put the groups in order from smallest volume to largest volume, if:

Four small cups =

A. 1 full large cup and 3 half full small cups.

B.

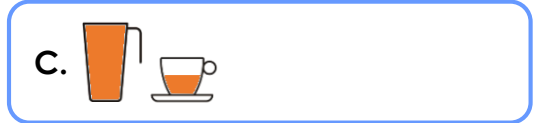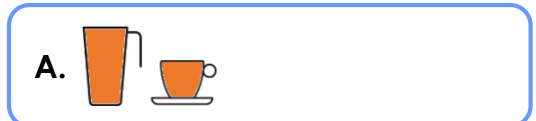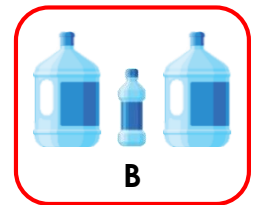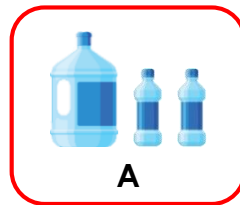C. 2 half full large cups and 4 half full small cups.

PS

Compare Capacity

7b. Put the groups in order from largest volume to smallest volume, if:

 = One large cup

A.

B. 3 half full large cups and 4 full small cups.

C. 2 full large cups and 4 empty small cups.

PS

8a. Look at the comparison below:

 = One large bottle

Group A must have an equal capacity to group B.

1 large bottle and 2 small bottles

A

B

What bottles could be added to group A?

PS

8b. Look at the comparison below:

Five small bottles =

Group A must have an equal capacity to group B.

A

1 large bottle and 3 small bottles

B

What bottles could be added to group B?

PS

9a. Finish the reasoning.

A. 1 jug and 1 bottle

B.

Group A has a smaller capacity because…

R

9b. Finish the reasoning.

A.

B. 1 full jug and 2 full bottles

Group B has a larger volume because…

R

Reasoning and Problem Solving – Compare Capacity – Year 1 Greater Depth

Reasoning and Problem Solving
Compare Capacity

Developing

1a. C, A, B
2a. 2 small bottles
3a. Group B has a larger capacity because it has more containers.

Expected

4a. B, C, A
5a. 2 small bottles
6a. Group A has a smaller volume because it has fewer full containers.

Greater Depth

7a. A, C, B
8a. Either 7 small bottles or 1 large bottle and 3 small bottles
9a. Various possible answers, for example: Group A has a smaller capacity because it has one bottle fewer.

Reasoning and Problem Solving
Compare Capacity

Developing

1b. C, A, B
2b. Either 2 small bottles, or 1 large bottle
3b. Group B has a smaller volume because its container is empty.

Expected

4b. B, C, A
5b. 3 small bottles
6b. The groups have equal capacity because they have the same containers.

Greater Depth

7b. B, C, A
8b. Either 1 large bottle or 5 small bottles
9b. Various possible answers; for example: Group B has a larger volume because 2 full bottles have a greater volume than 3 half full bottles.

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