

# Varied Fluency

## Step 4: Estimate Capacity

### National Curriculum Objectives:

Mathematics Year 5: (5M8) [Estimate volume \[for example, using 1 cm<sup>3</sup> blocks to build cuboids \(including cubes\)\] and capacity \[for example, using water\]](#)

Mathematics Year 5: (5M9a) [Use all four operations to solve problems involving measure \[for example, length, mass, volume, money\] using decimal notation, including scaling](#)

### Differentiation:

**Developing** Questions to support estimating capacity using the same containers in various sizes and volumes that are all in multiples of 100ml .

**Expected** Questions to support estimating capacity using similar containers in various sizes and volumes that are all in multiples of 50ml .

**Greater Depth** Questions to support estimating capacity using different containers in various sizes and volumes that are all in multiples of 5ml.

More [Year 5 Volume](#) resources.

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## Estimate Capacity

1a. There is 200ml of water in this container. Estimate the capacity of the container.



VF

## Estimate Capacity

1b. There is 500ml of water in this container. Estimate the capacity of the container.



VF

2a. Using the capacity of container A, estimate the capacity of containers B and C.



B.



C.



VF

2b. Using the capacity of container A, estimate the capacity of containers B and C.



B.



C.



VF

3a. Container A is full of rice. Estimate how many of container A would fill container B?

A.



B.



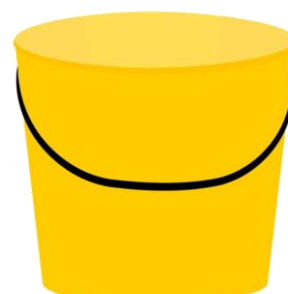
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3b. Bucket A is full of sand. Estimate how many of container A would fill container B?

A.



B.



VF

## Estimate Capacity

4a. There is 550ml of water in this container. Estimate the capacity of the container.



VF

## Estimate Capacity

4b. There is 150ml of water in this container. Estimate the capacity of the container.



VF

5a. Using the capacity of container A, estimate the capacity of containers B and C.



VF

5b. Using the capacity of container A, estimate the capacity of containers B and C.



VF

6a. Estimate how many cups of rice it would take to fill bottles A and B.



A.



B.

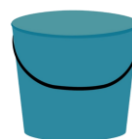


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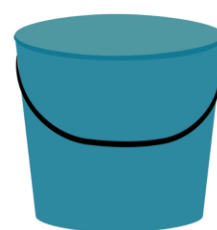
6b. Estimate how many cups of rice it would take to fill bottles A and B.



A.



B.



VF

## Estimate Capacity

7a. There is 205ml of tea in this container. Estimate the capacity of the container.



VF

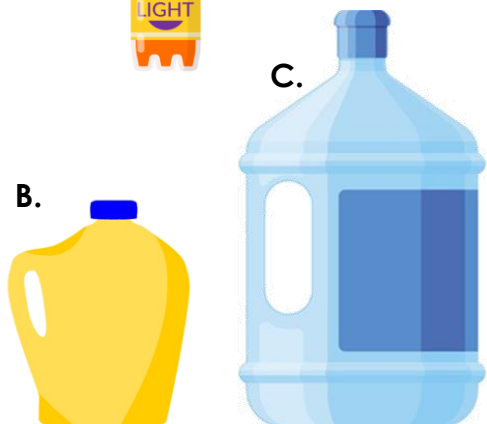
## Estimate Capacity

7b. There is 635ml of juice in this container. Estimate the capacity of the container.



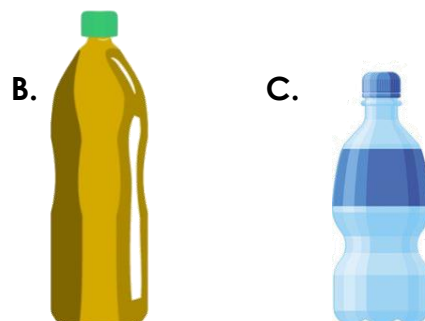
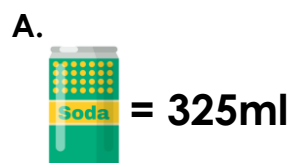
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8a. Using the capacity of container A, estimate the capacity of containers B and C.



VF

8b. Using the capacity of container A, estimate the capacity of containers B and C.



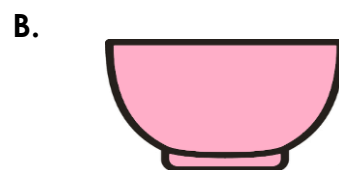
VF

9a. Estimate how many cups of rice it would take to fill containers A and B.



VF

9b. Estimate how many spoons of rice it would take to fill containers A and B.



VF

## Varied Fluency Estimate Capacity

### Developing

- 1a. Various possible answers around 1,000ml.
- 2a. B: Answers around 100ml; C: answers around 1,200ml.
- 3a. Various possible answers around 8.

### Expected

- 4a. Various possible answers around 650ml.
- 5a. B: Answers around 1,000ml; C: Answers around 4,000ml.
- 6a. A: Various possible answers around 12; B: Various possible answers around 24.

### Greater Depth

- 7a. Various possible answers around 1,100ml.
- 8a. B: Answers around 1,335ml; C: Answers around 4,005ml.
- 9a. A: Various possible answers around 4; B: Various possible answers around 24.

## Varied Fluency Estimate Capacity

### Developing

- 1b. Various possible answers around 1,000ml.
- 2b. B: Answers around 200ml; C: answers around 1,400ml
- 3b. Various possible answers around 8.

### Expected

- 4b. Various possible answers around 450ml.
- 5b. B: Answers around 1,350ml; C: Answers around 4,500ml.
- 6b. A: Various possible answers around 4; B: Various possible answers around 18.

### Greater Depth

- 7b. Various possible answers around 950ml. (Discussion may arise over the shape of the jug narrowing and how this affects capacity).
- 8b. B: Answers around 975ml; C: Answers around 650ml.
- 9b. A: Various possible answers around 4; B: Various possible answers around 12.