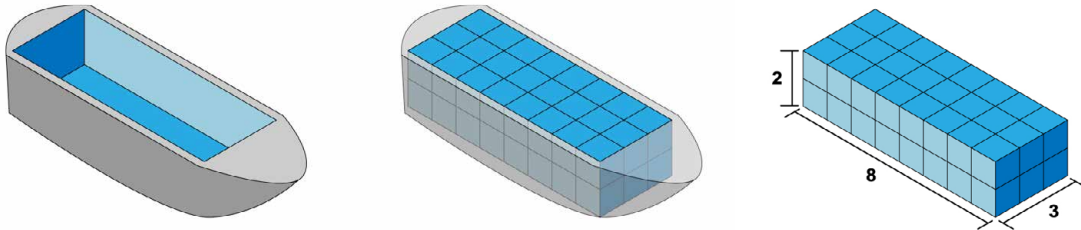


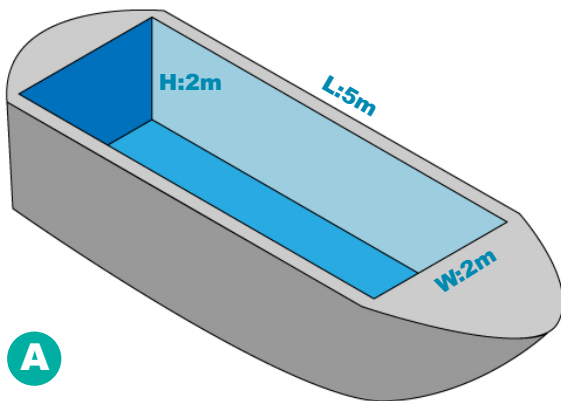
## TUNNELWORKS

### KS2 SCIENCE LESSON 1 WORKSHEET

# CALCULATING VOLUMES

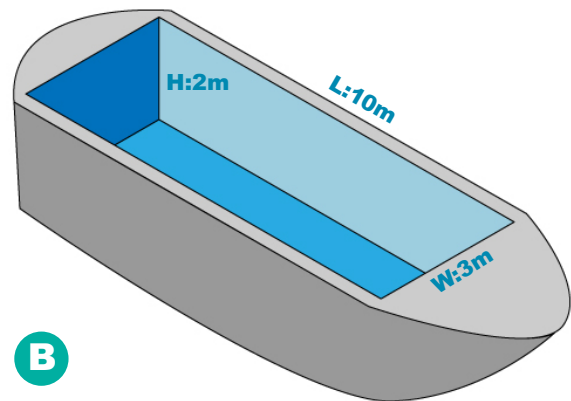


Work out how much spoil each barge can carry. Each cube is equal to  $1\text{m}^3$  and weighs 2 metric tonnes. Use the pictures at the top of the worksheet to remind yourself how to do the calculation.



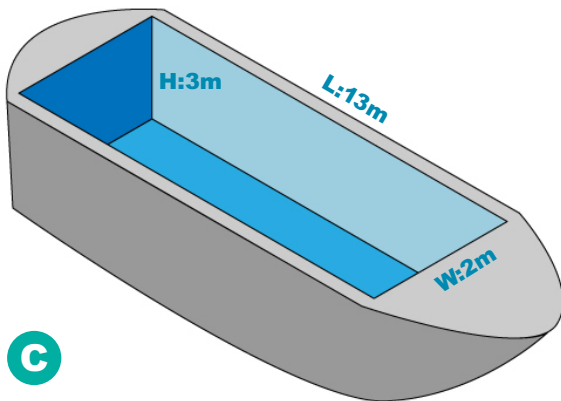
**A**

The volume is \_\_\_\_\_



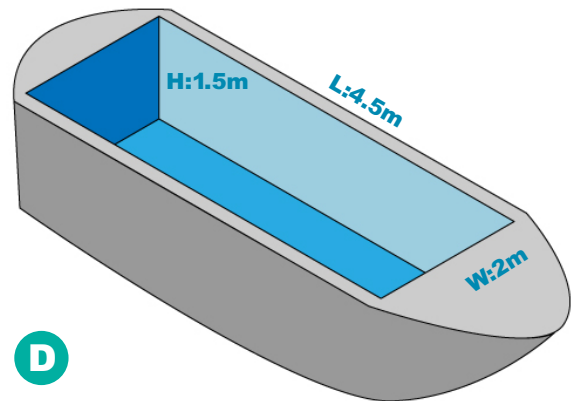
**B**

The volume is \_\_\_\_\_



**C**

The volume is \_\_\_\_\_



**D**

The volume is \_\_\_\_\_

**Questions:**

1. Which barge has the biggest volume?

Barge \_\_\_\_\_

.....

2. If the engineer has 120 tonnes of spoil to load, which barge is the best one to use?

Barge \_\_\_\_\_

.....

3. Thames Tideway Tunnel can only use barge A today.

How much spoil can it take? \_\_\_\_\_ tonnes

How much of the 120 tonnes will be left? \_\_\_\_\_ tonnes

**Extension**

Use squared paper to draw your own different sized barge holds and ask a partner to calculate what the volume of it is.

**Answers:**

**1. Which barge has the biggest volume?**

**Answer:** Barge C

**Barge A:** 20 cubic metres, or 40 tonnes

**Barge B:** 60 cubic metres, or 120 tonnes

**Barge C:** 78 cubic metres, or 156 tonnes

**Barge D:** 13.5 cubic metres, or 27 tonnes

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**2. If the engineer has 120 tonnes of spoil to load, which barge is the best one to use?**

**Answer:** Barge B (each cubic metre of spoil weighs two metric tonnes)

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**3. Thames Tideway Tunnel can only use barge A today. How much spoil can it take and how much of the 120 tonnes will be left?**

**Answer:** It can carry 40 tonnes, so 80 tonnes will be left behind.

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