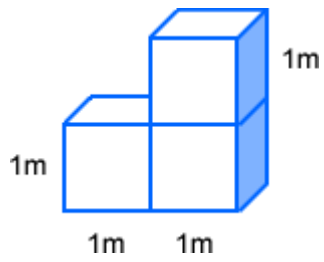


# Year 8 Volume Progress Test

## Question 1

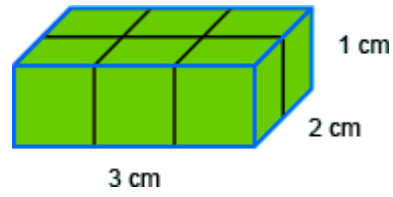
What is the volume of this prism?



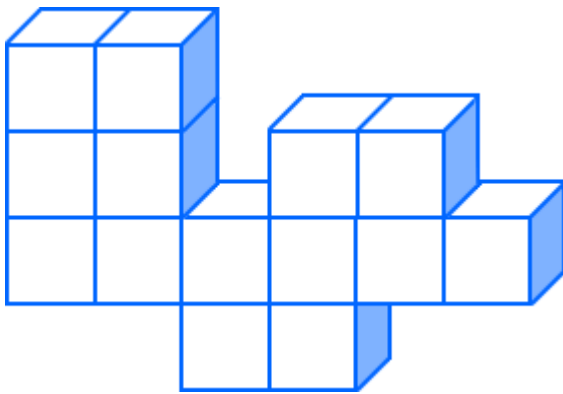
- a.  $3^2$  cm
- b.  $3$  m<sup>3</sup>
- c.  $3^3$  m
- d.  $4$  m<sup>3</sup>

## Question 2

How many centimetre cubes make a rectangular prism that is 3 cm long, 2 cm wide and 1 cm high?



## Question 3



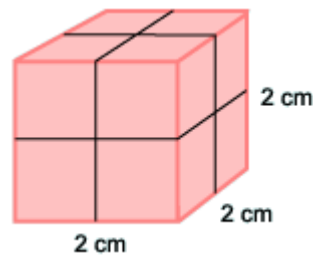
This 3D object is made from millimetre cubes.

What is its volume?

 mm<sup>3</sup>

## Question 4

How many cubic centimetres are in a cube with side lengths 2 cm?

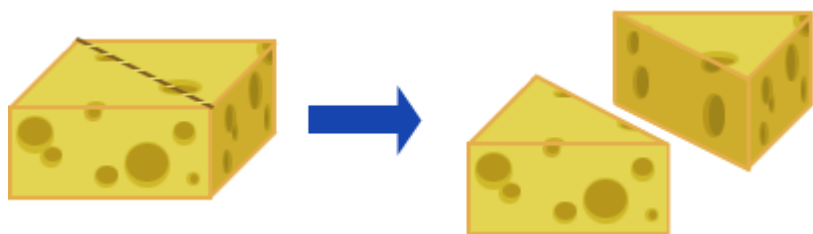
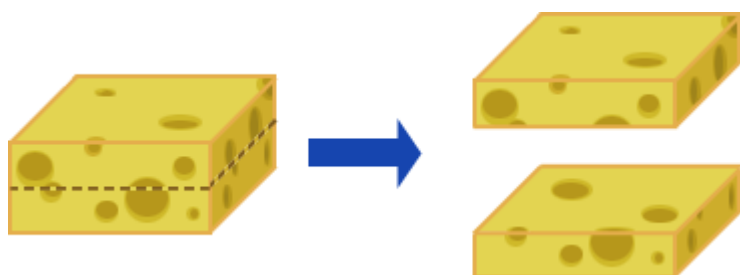
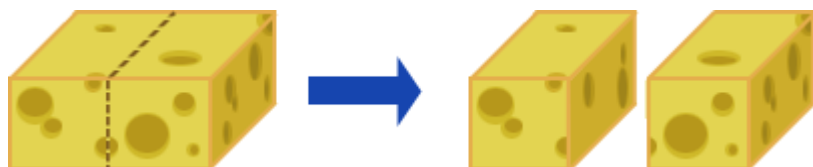


### Question 5

These blocks of cheese are square prisms, each 6 cm by 6 cm by 3 cm.



Each block is cut into two equal pieces as shown.



Zach ate one of each of the three different shaped pieces.

What volume of cheese did Zach eat?

cm<sup>3</sup>

### Question 7

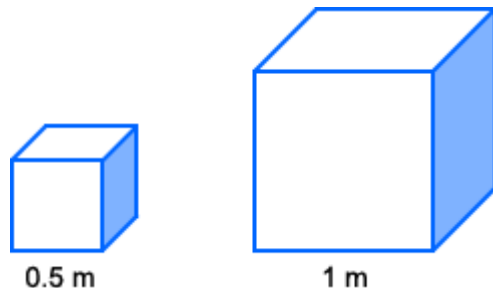
A cube has a volume of 64 mm<sup>3</sup>.

How long is each side?

mm

### Question 6

Which of the following statements is true about these two cubes?



- a) The small cube's volume is  $\frac{1}{2}$  the volume of the larger cube.
- b) The small cube's volume is  $\frac{1}{4}$  the volume of the larger cube.
- c) The small cube's volume is  $\frac{1}{8}$  the volume of the larger cube.
- d) The small cube's volume is  $\frac{1}{10}$  the volume of the larger cube.

### Question 8

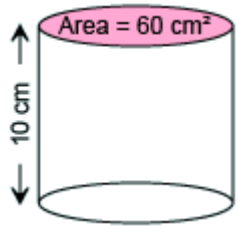
48 centimetre cubes fit exactly into a rectangular prism of length 6 cm and breadth 2 cm.

What is the height of the box?

cm

### Question 9

This cylinder has a cross-sectional area of  $60 \text{ cm}^2$  and a height of  $10 \text{ cm}$ .

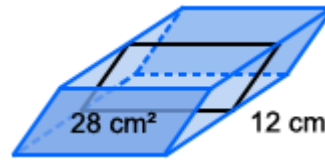


Calculate its volume.

$\text{cm}^3$

### Question 10

A prism has a parallelogram with area  $28 \text{ cm}^2$  on each end and height  $12 \text{ cm}$ .

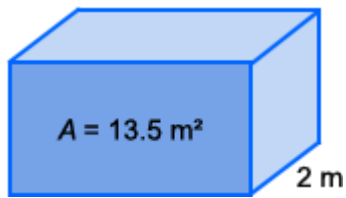


What is the volume?

Volume =   $\text{cm}^3$

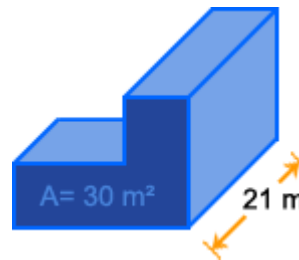
### Question 11

Find the volume of this rectangular prism with cross-sectional area of  $13.5 \text{ m}^2$  and length  $2 \text{ m}$ .



Volume =   $\text{m}^3$

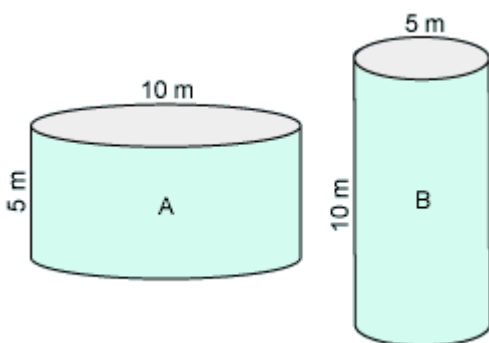
### Question 12



$$V = A \times h$$
$$= \text{  } \text{ m}^3$$

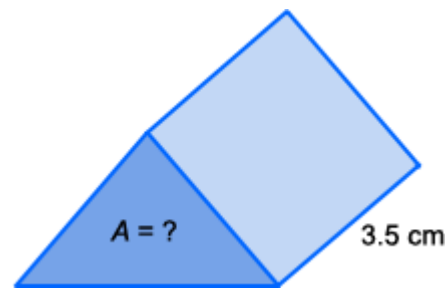
### Question 13

Cylinder A has diameter  $10 \text{ m}$  and cylinder B's diameter is  $5 \text{ m}$ . Which cylinder has the greater volume?



- a) Cylinder A
- b) Cylinder B
- c) Neither, both cylinders have the same volume.

### Question 14

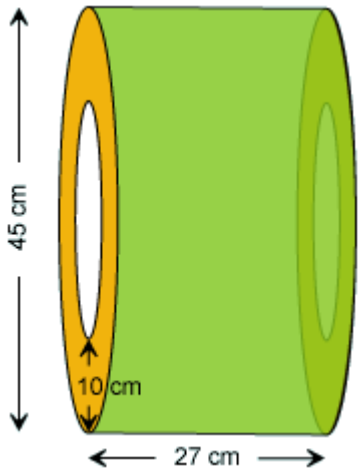


Volume =  $70 \text{ cm}^3$

Area of base, A =   $\text{cm}^2$

### Question 15

Calculate the volume of this pipe in terms of  $\pi$ .

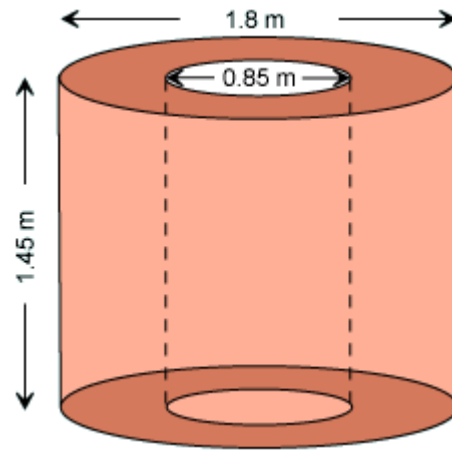


Volume =   $\pi \text{ cm}^3$

### Question 16

What volume of concrete is needed to make this pipe?

Give your answer correct to two decimal places.



Volume =   $\text{m}^3$  (to 2 decimal places)