



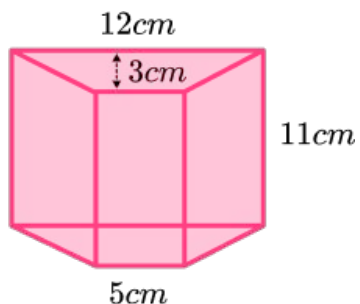
THIRD SPACE
LEARNING

GCSE Exam Questions

Volume of Prisms | Geometry &
Measure

GCSE Exam Questions: Volume of Prisms

- 1) (a) Work out the volume of this carton of juice.



(3)

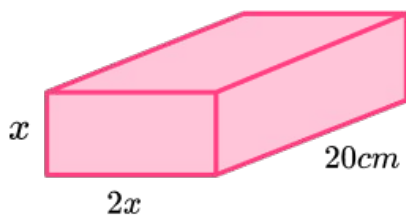
- (b) The juice is made from a mixture of concentrate and water in the ratio 2 : 3.
How many millilitres of concentrate would be required for this carton?

(3)

(6 marks)

GCSE Exam Questions: Volume of Prisms

- 2) (a) Calculate the value of x in the diagram.



$$\text{Volume} = 640 \text{ cm}^3$$

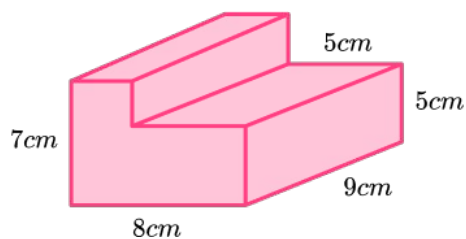
(3)

- (b) If the length of the rectangle is doubled to 40cm , work out the new volume of the cuboid.

(2)
(5 marks)

GCSE Exam Questions: Volume of Prisms

- 3) (a) Work out the volume of the prism.

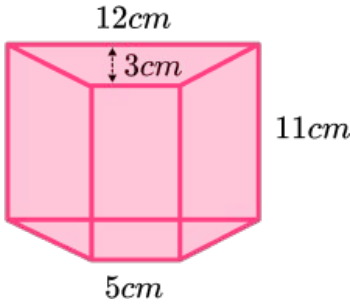
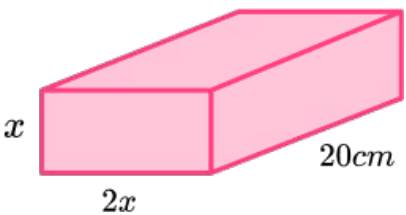
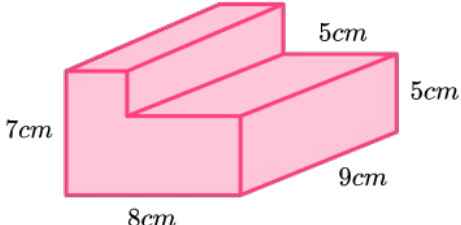


(3)

- (b) If the prism is enlarged by a scale factor of 3, what is the new volume?

(2)
(5 marks)

GCSE Exam Questions: Volume of Prisms Answers

	Question	Answer	Marks
1) (a)	Work out the volume of this carton of juice. 	(a) Area of trapezium = $\frac{1}{2}(3)(5 + 12)$ $= 25.5\text{cm}^2$ $\text{Volume} = 25.5 \times 11$ $\text{Volume} = 280.5\text{cm}^3$	(1) (1) (1)
(b)	The juice is made from a mixture of concentrate and water in the ratio 2:3. How many millilitres of concentrate would be required for this carton?	(b) $280.5 \div (2 + 3) = 56.1$ $56.1 \times 2 = 112.2\text{cm}^3$ 112.2ml	(1) (1) (1)
2) (a)	Calculate the value of x in the diagram.  Volume = 640 cm^3	(a) $V = l \times w \times h$ $V = 2x \times x \times 20$ $640 = 40x^2$ $x^2 = 16$ $x = 4$ (do not accept $x = \pm 4$ or $x = -4$)	(1) (1) (1)
(b)	If the length of the rectangle is doubled to 40cm , work out the new volume of the cuboid.	(b) $V = l \times w \times h$ $V = 40 \times 8 \times 4$ $V = 1280\text{cm}^3$	(1) (1) (1)
3) (a)	Work out the volume of the prism. 	(a) $(8)(5) + (2)(3) = 46\text{cm}^2$ $V = 46 \times 9$ $V = 414\text{cm}^3$	(1) (1) (1)
(b)	If the prism is enlarged by a scale factor of 3, what is the new volume?	(b) 3^3 or 27 seen $414 \times 3^3 = 11178\text{cm}^3$	(1) (1)

Where to go next?

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