



THIRD SPACE
LEARNING

GCSE Exam Questions

Volume and Surface Area of
Cuboids | Geometry & Measure

GCSE Exam Questions: Volume and Surface Area of Cuboids

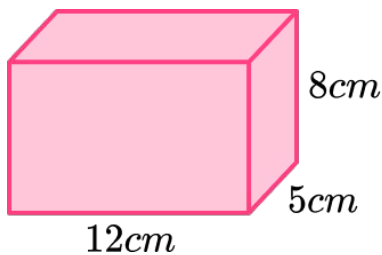
- 1) (a) Work out the volume of a cube with side length 8cm .

(2)

- (b) Work out the surface area of a cube with side length 8cm .

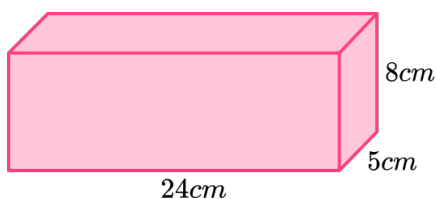
(2)
(4 marks)

- 2) (a) Work out the surface area of the cuboid:



(3)

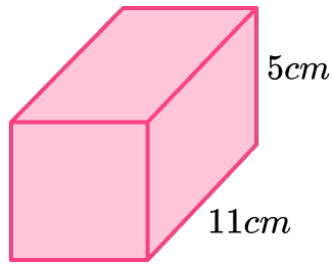
- (b) Lucy says that the surface area of this cuboid will be twice as big as that of the cuboid in part (a). Is she correct?
Show how you decide.



(2)
(5 marks)

GCSE Exam Questions: Volume and Surface Area of Cuboids

- 3) The volume of this cuboid is 220cm^3 .



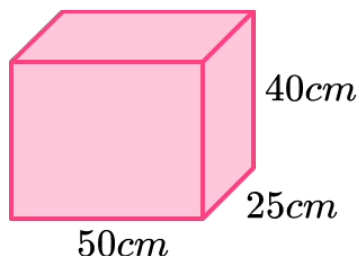
- (a) Work out the length of the cuboid.

(2)

- (b) Work out the surface area of the cuboid.

(3)
(5 marks)

- 4) The fuel tank from Gary's car is pictured below:



The tank is currently $\frac{1}{4}$ full.

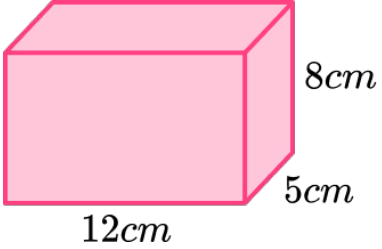
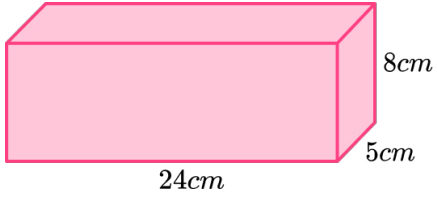
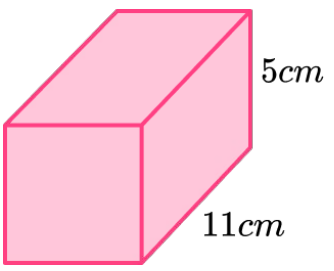
Gary wants to fill the tank.

Fuel costs £1.30 per litre ($1\text{l} = 1000\text{cm}^3$).

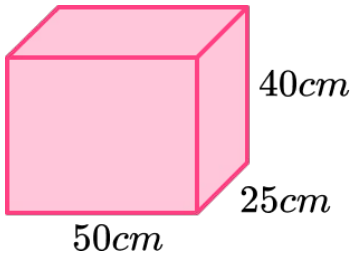
How much will it cost Gary to fill his tank?

(5 marks)

GCSE Exam Questions: Volume and Surface Area of Cuboids Answers

	Question	Answer	Marks
1) (a)	Work out the volume of a cube with side length 8cm .	(a) $8 \times 8 \times 8$ 512cm^3	(1) (1)
(b)	Work out the surface area of a cube with side length 8cm .	(b) $8 \times 8 \times 6$ 384cm^2	(1) (1)
2) (a)	Work out the surface area of the cuboid: 	(a) $12 \times 5 = 60$ or $12 \times 8 = 96$ or $5 \times 8 = 40$ $60 + 60 + 96 + 96 + 40 + 40$ 392cm^2	(1) (1) (1)
(b)	Lucy says that the surface area of this cuboid will be twice as big as that of the cuboid in part (a). Is she correct? Show how you decide 	(b) Calculate surface area: $120 + 120 + 192 + 192 + 40 + 40$ $= 704\text{cm}^2$ No and 704 is not double 392 oe or The left side and right side remain the same oe No and only 4 of the surfaces are doubled	(1) (1) (1) (1)
3) (a)	The volume of this cuboid is 220cm^3 .  Work out the length of the cuboid.	(a) $200 \div (11 \times 5)$ <i>oe</i> 4cm	(1) (1)
(b)	Work out the surface area of the cuboid.	(b) $4 \times 5 = 20$ or $11 \times 5 = 55$ or $4 \times 11 = 44$ $20 + 20 + 55 + 55 + 44 + 44$ 238cm^2	(1) (1) (1)

GCSE Exam Questions: Volume and Surface Area of Cuboids Answers

	Question	Answer	Marks
4)	The fuel tank from Gary's car is pictured below:  The tank is currently $\frac{1}{4}$ full. Gary wants to fill the tank. Fuel costs £1.30 per litre ($1l = 1000cm^3$). How much will it cost Gary to fill his tank?	Volume of fuel tank: $50 \times 25 \times 40 = 50000cm^3$ $50000cm^3 = 50l$ $\frac{1}{4}$ of $50 = 12.5$ $50 - 12.5 = 37.5$ $37.5 \times £1.30 = £48.75$	(1) (1) (1) (1) (1)

Where to go next?

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