

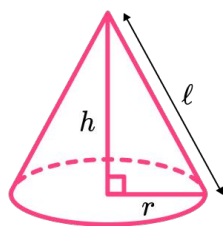


THIRD SPACE
LEARNING

GCSE Exam Questions

Volume and Surface Area of
Cones | Geometry & Measure

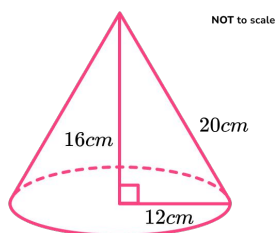
GCSE Exam Questions: Volume and Surface Area of Cones



$$\text{Volume of a cone} = \frac{1}{3}\pi r^2 h$$

$$\text{Curved surface area of a cone} = \pi r l$$

1) Here is a cone.

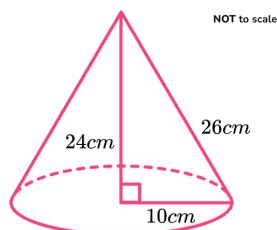


Calculate the total surface area of the cone.

Give your answer to 3 significant figures.

(2 marks)

2) Here is a cone.



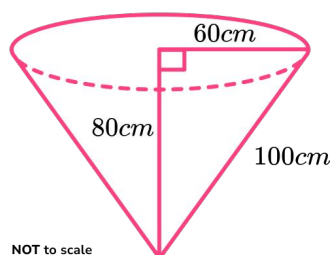
Calculate the total surface area of the cone.

Give your answer to 3 significant figures.

(3 marks)

GCSE Exam Questions: Volume and Surface Area of Cones

- 3) A container is a cone of radius 60cm , perpendicular height 80cm and slant height 100cm .



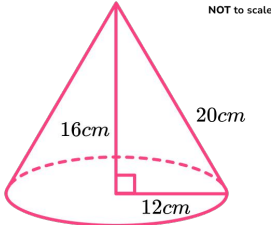
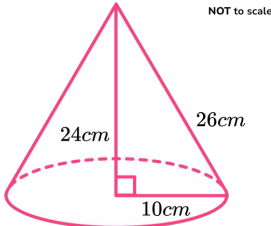
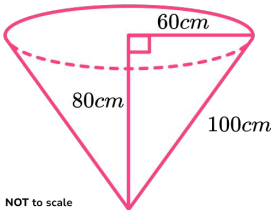
Water fills the container at a rate of 12 litres per minute.

How long does it take to fill the container?

Give your answer to the nearest minute.

(4 marks)

GCSE Exam Questions: Volume and Surface Area of Cones Answers

	Question	Answer	Marks
1)	Here is a cone.  Calculate the total surface area of the cone. Give your answer to 3 significant figures.	$\frac{1}{3} \times \pi \times 12^2 \times 16$ $= 2412.7... = 2410 \text{ cm}^3$	(1) (1)
2)	Here is a cone.  Calculate the total surface area of the cone. Give your answer to 3 significant figures.	$\pi \times 10 \times 26 = 260\pi = 816.814...$ $= 816.814... + \pi \times 10^2$ $= 360\pi = 1130.9... = 1130 \text{ cm}^2$	(1) (1) (1)
3)	A container is a cone of radius 60cm, perpendicular height 80cm and slant height 100cm.  Water fills the container at a rate of 12 litres per minute. How long does it take to fill the container? Give your answer to the nearest minute.	$\frac{1}{3} \times \pi \times 60^2 \times 80 = 301\,592.9...$ 12 litres per minute = 12 000 cm³ per minute $301\,592.9... \div 12000 = 25.13...$ 25 minutes	(1) (1) (1) (1)

Where to go next?

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