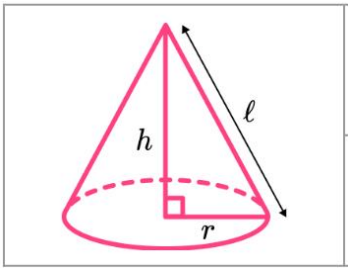
THIRD SPACE LEARNING

GCSE Exam Questions

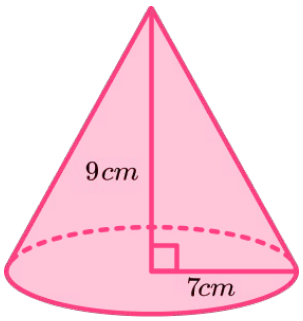
Surface Area of Cones | Geometry & Measure

GCSE Exam Questions: Surface Area of Cones



$Volume\ of\ a\ cone = \frac{1}{3}\pi r^2 h$
$Curved\ surface\ area\ of\ a\ cone = \pi rl$

1) Here is a cone.



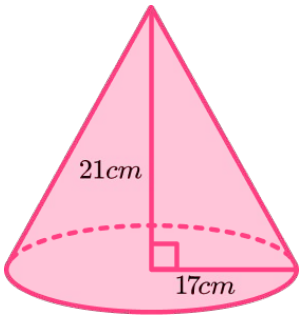
Calculate the **total surface area** of the cone.

Give your answer to 3 significant figures.

_____ cm^2

(4 marks)

2) Here is a cone.



Calculate the total surface area of the cone.

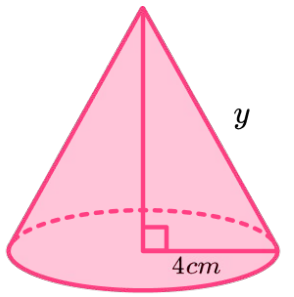
Give your answer in terms of .

_____ cm^2

(3 marks)

GCSE Exam Questions: Surface Area of Cones

3) Here is a cone.



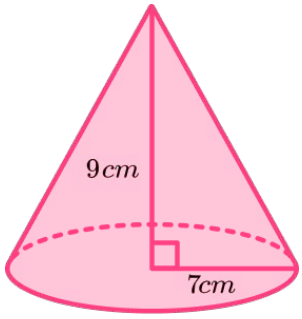
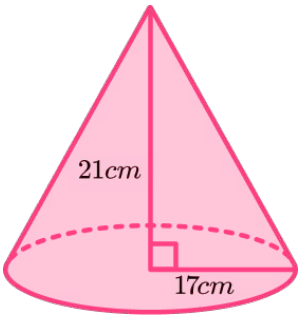
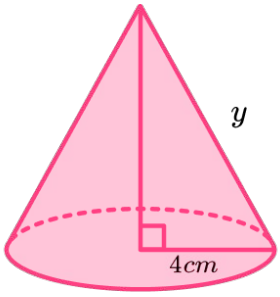
$Surface\ Area = 280cm^2$

It has a base radius of $4cm$ and a surface area of $280cm^2$

What is the value of y?

(4 marks)

GCSE Exam Questions: 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.	$SA = \pi rl + \pi r^2$ **or** $SA = \pi r(r + \sqrt{h^2 + r^2})$ $SA = \pi(7)(7 + \sqrt{(9)^2 + (7)^2})$ $SA = 404.6757118$ $405cm^2$	**(1)** **(1)** **(1)** **(1)**
2)	Here is a cone.  Calculate the total surface area of the cone. Give your answer in terms of π.	$SA = \pi rl + \pi r^2$ **or** $SA = \pi r(r + \sqrt{h^2 + r^2})$ $SA = \pi(17)(17 + \sqrt{(21)^2 + (17)^2})$ $SA = 748.31\pi cm^2$	**(1)** **(1)** **(1)**
3)	Here is a cone.  $Surface\ Area = 280cm^2$ It has a base radius of $4cm$ and a surface area of $280cm^2$. What is the value of y?	$SA = \pi rl + \pi r^2$ $280 = \pi(4)y + \pi(4)^2$ $280 - 16\pi = 4\pi y$ $y = 18.28...cm$	**(1)** **(1)** **(1)** **(1)**

Where to go next?

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