Volume of a Cone - Worksheet

Skill

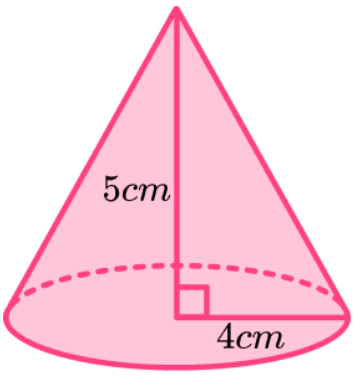
Group A - Volume of cones given the radius

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

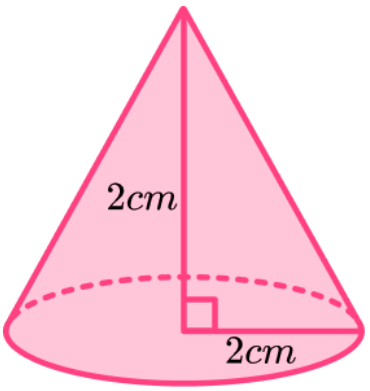
Work out the volume of the cone. All dimensions are in cm.

Diagrams are NOT to scale. Give your answer correct to 2 d.p:

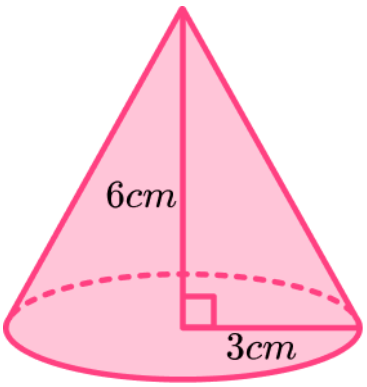
1)



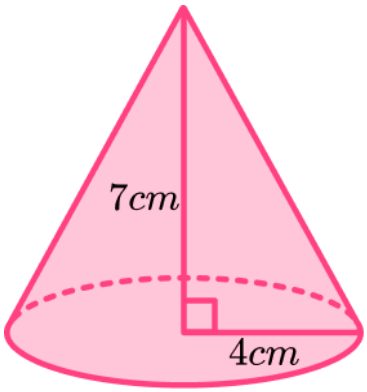
2)



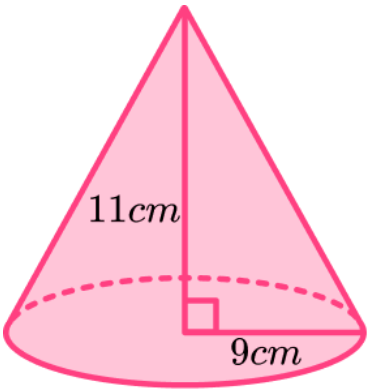
3)



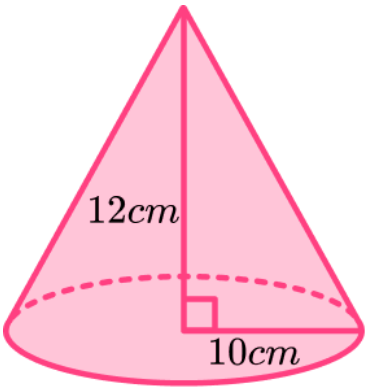
4)



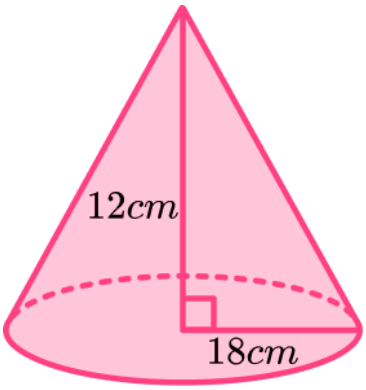
5)



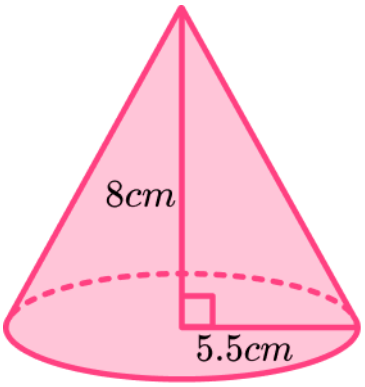
6)



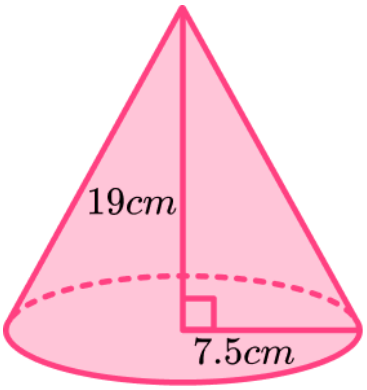
7)



8)



9)



Volume of a Cone - Worksheet

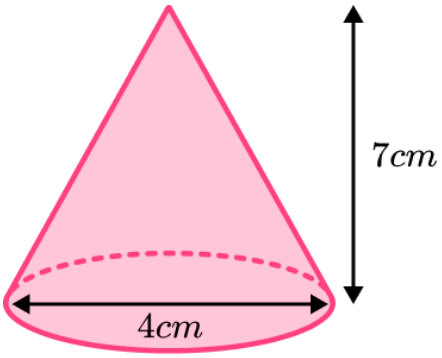
Group B - Volume of cones given the diameter

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

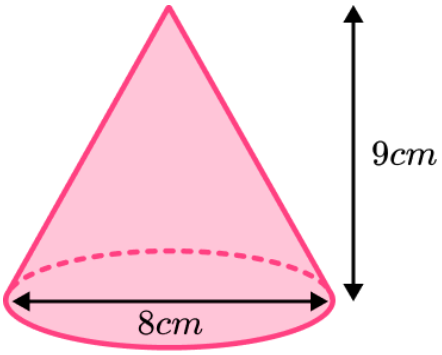
Work out the volume of the cone.

Diagrams are NOT to scale. Give your answer correct to 2 d.p:

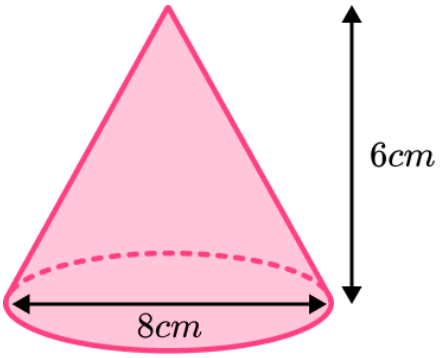
1)



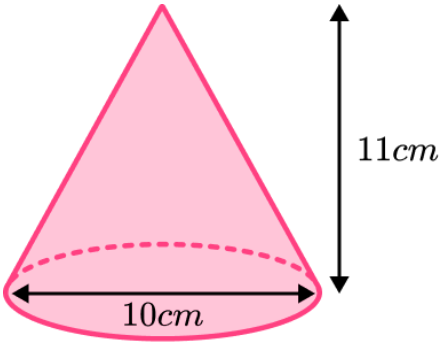
2)



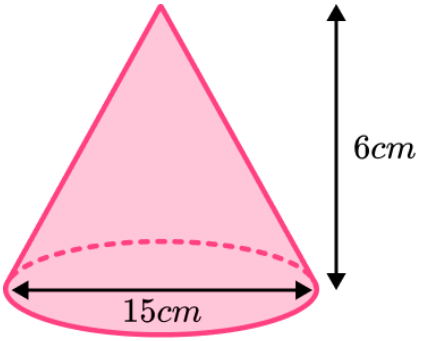
3)



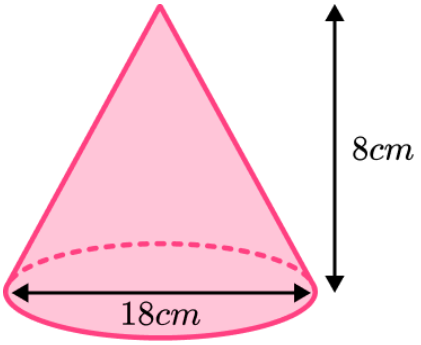
4)



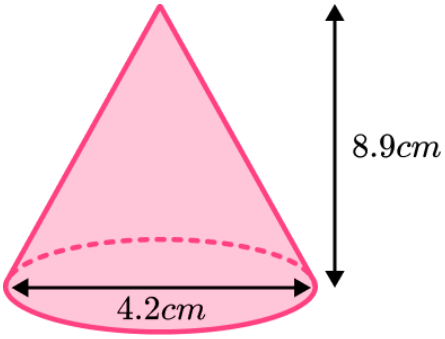
5)



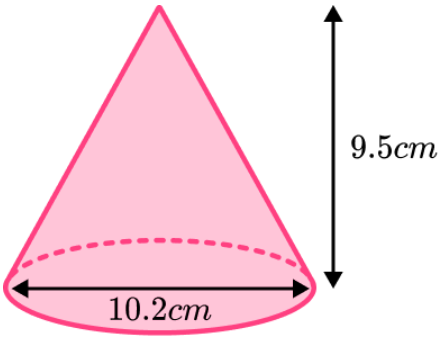
6)



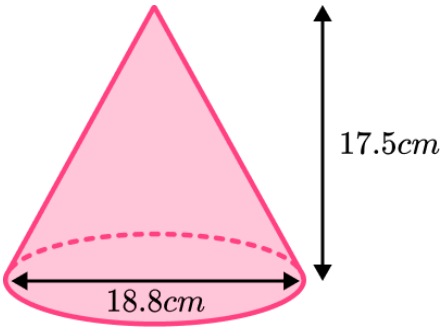
7)



8)



9)



Volume of a Cone - Worksheet

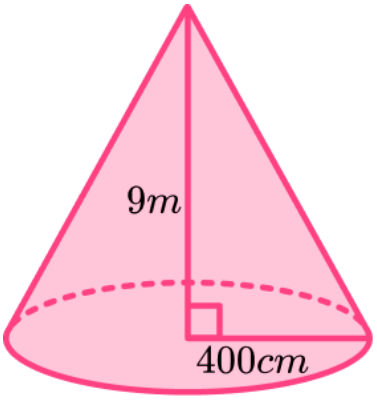
Group C - Volume of cones with unit conversion

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

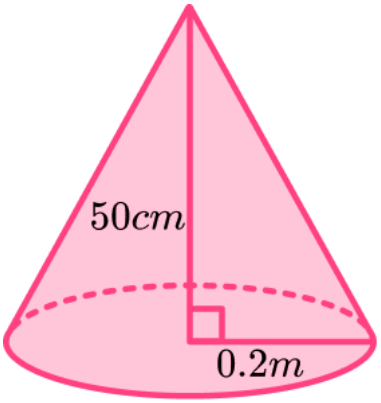
Work out the volume of the cone.

Diagrams are NOT to scale. Give your answer correct to 2 d.p:

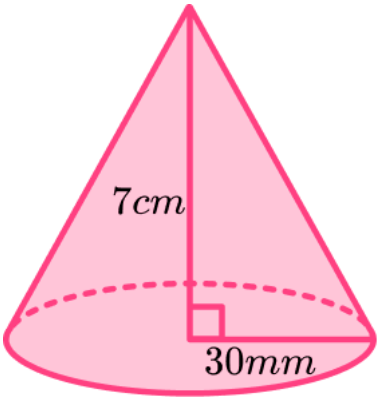
1)



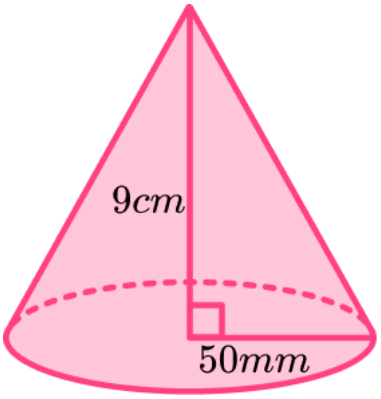
2)



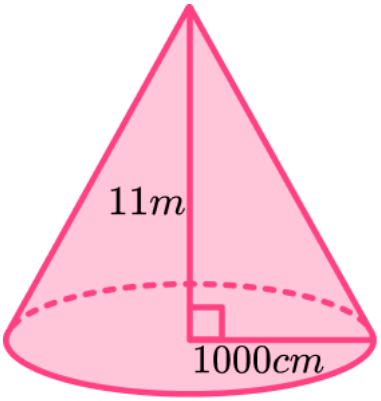
3)



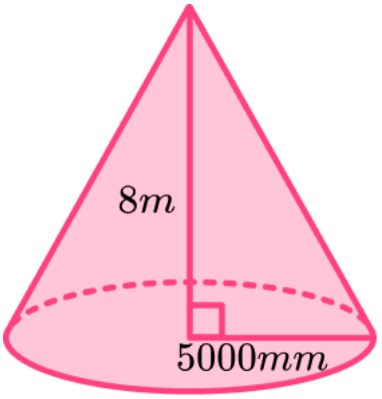
4)



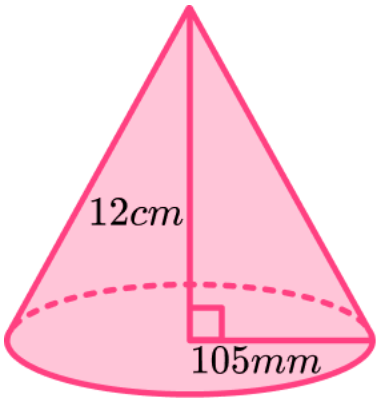
5)



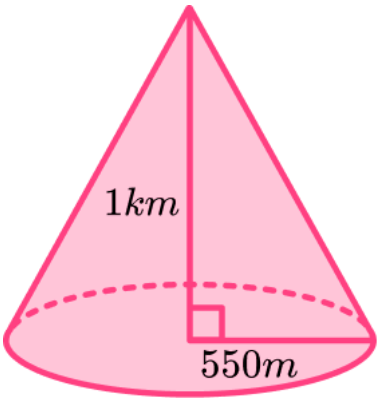
6)



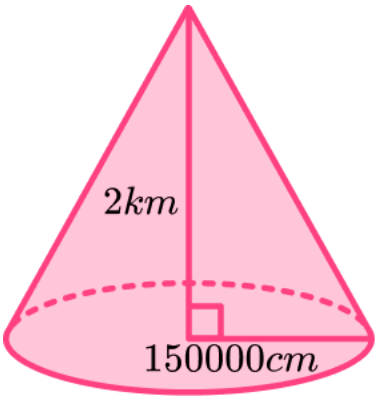
7)



8)



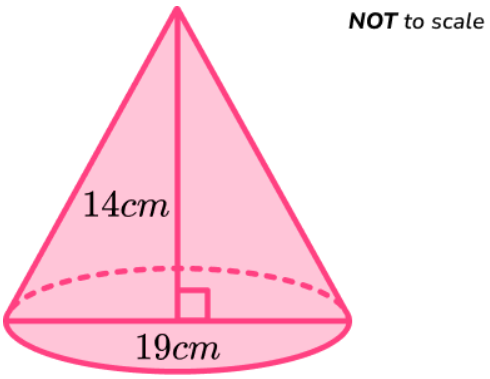
9)



Volume of a Cone - Worksheet

Applied

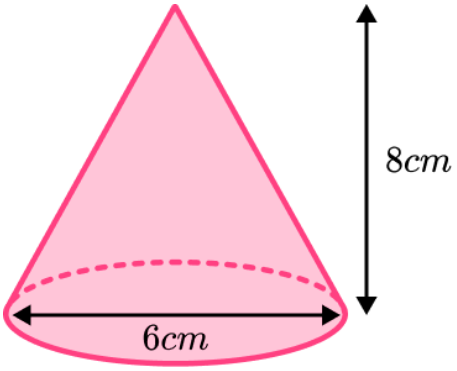
1) **(a)**



Work out the volume of the cone above.
Diagrams are NOT to scale. Leave your answer in terms of π.

(b) Convert your answer in (a) to a decimal and write it to 3 significant figures.

2) **(a)**

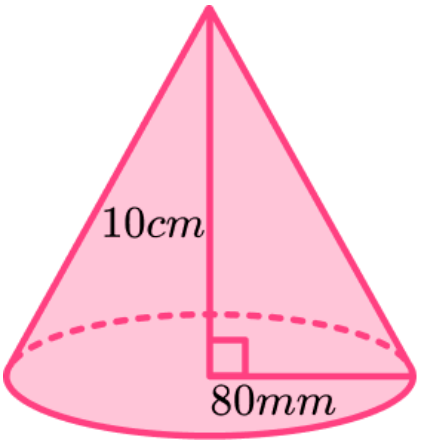


Work out the volume of the cone above.
Diagrams are NOT to scale. Give your answer correct to 3 significant figures.

(b) Convert your answer in (a) to mm^3 and write it to 3 significant figures.

Volume of a Cone - Worksheet

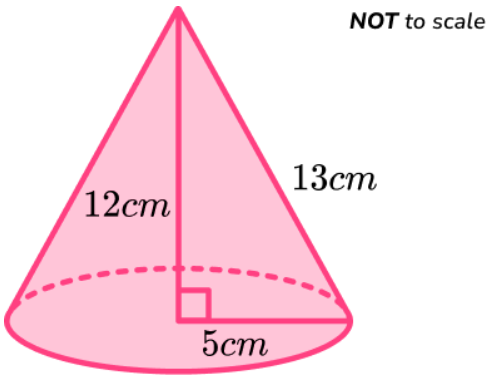
3)



Work out the volume of the cone above.
Diagrams are NOT to scale. Give your answer correct to 3 significant figures.

Volume of a Cone - Exam Questions

1) Here is a cone.



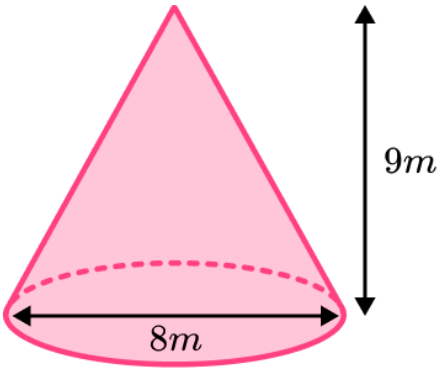
Calculate the volume of the cone.
Give your answer to 2 d.p.

.....

(2 marks)

---

2) Here is a cone.



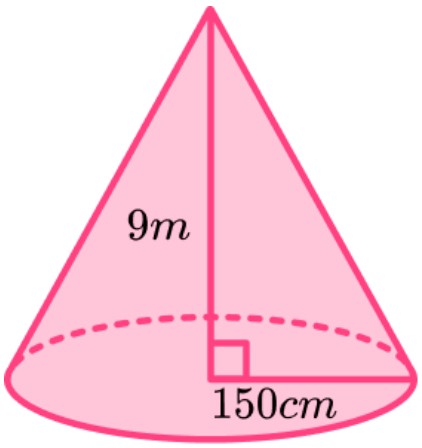
Calculate the volume of the cone.
Give your answer to 2 d.p.

.....

(2 marks)

Volume of a Cone - Exam Questions

3) Here is a cone.

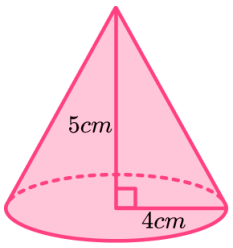
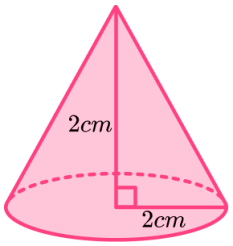
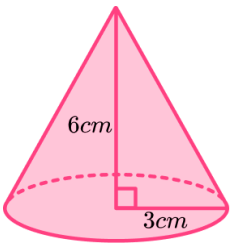
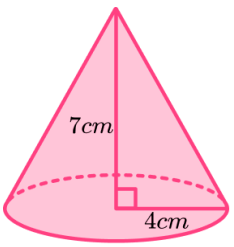


Calculate the volume of the cone.
Give your answer to 2 d.p.

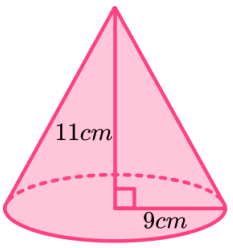
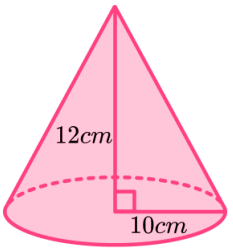
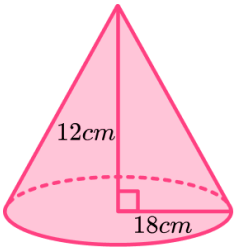
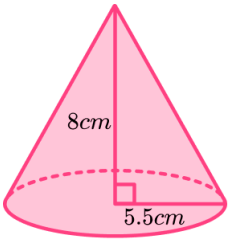
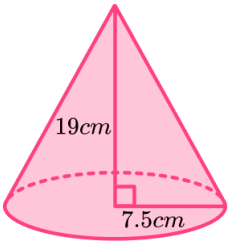
.....

(3 marks)

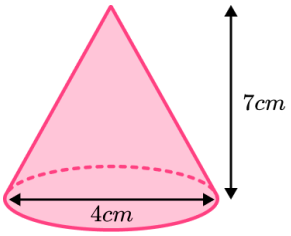
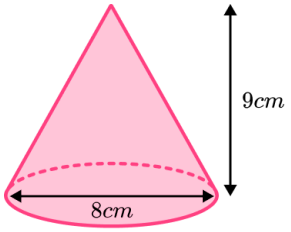
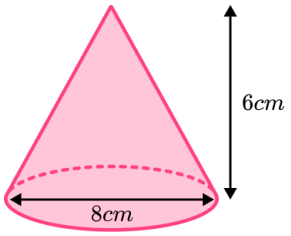
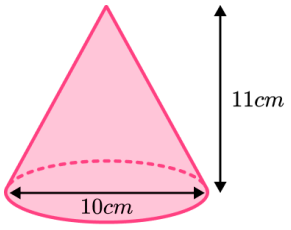
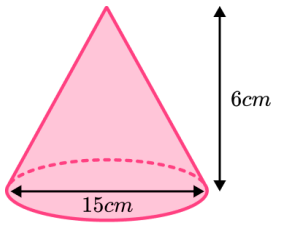
Volume of a Cone - Answers

	Question	Answer
	Skill Questions	
Group A	Work out the volume of the cone. All dimensions are in cm. Diagrams are NOT to scale. Give your answer correct to 2d.p: **1)**  **2)**  **3)**  **4)**  	**1)** $83.78cm^3$ **2)** $8.38cm^3$ **3)** $56.55cm^3$ **4)** $117.29cm^3$

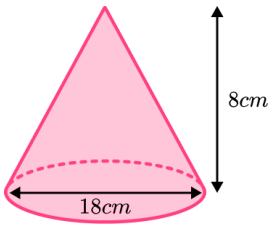
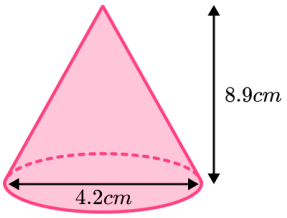
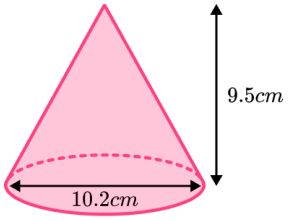
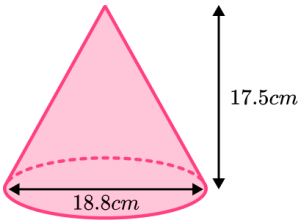
Volume of a Cone - Answers

Group A contd	**5)** 	**5)** $933.05cm^3$
	6) 	**6)** $1256.64cm^3$
	7) 	**7)** $4071.50cm^3$
	8) 	**8)** $253.42cm^3$
	9) 	**9)** $1119.19cm^3$

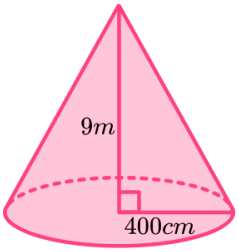
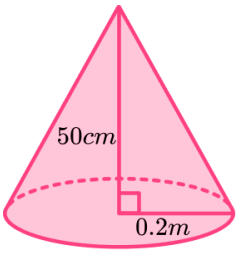
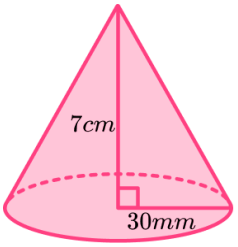
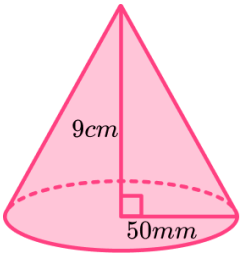
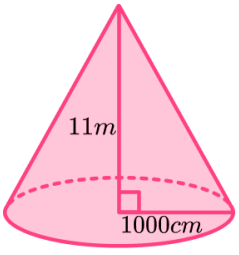
Volume of a Cone - Answers

Group B	Work out the volume of the cone. Diagrams are NOT to scale. Give your answer correct to 2d.p: **1)**  **2)**  **3)**  **4)**  **5)**  	**1)** $29.32cm^3$ **2)** $150.80cm^3$ **3)** $100.53cm^3$ **4)** $287.98cm^3$ **5)** $353.43cm^3$

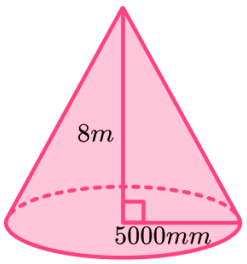
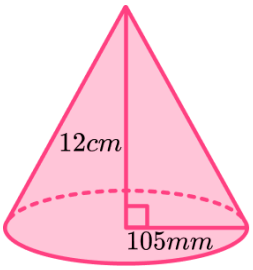
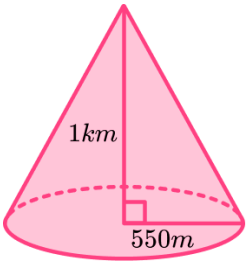
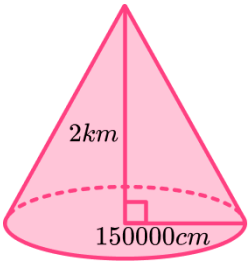
Volume of a Cone - Answers

Group B contd	**6)** 	**6)** $678.58cm^3$
	7) 	**7)** $41.10cm^3$
	8) 	**8)** $258.76cm^3$
	9) 	**9)** $1619.28cm^3$

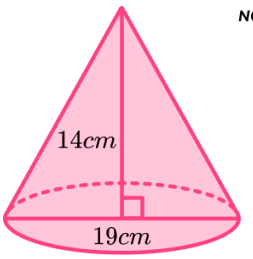
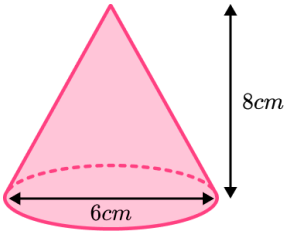
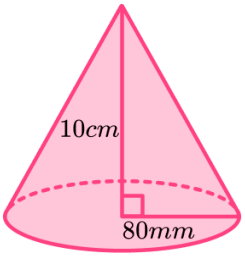
Volume of a Cone - Answers

Group C	Work out the volume of the cone. Diagrams are NOT to scale. Give your answer correct to 2d.p: **1)**  **2)**  **3)**  **4)**  **5)** 	**1)** $150.80m^3$ **2)** $20943.95cm^3$ **3)** $65.97cm^3$ **4)** $235.62cm^3$ **5)** $1151.92m^3$

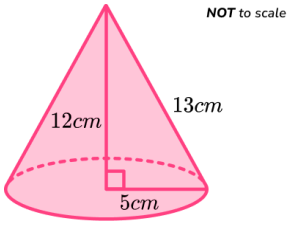
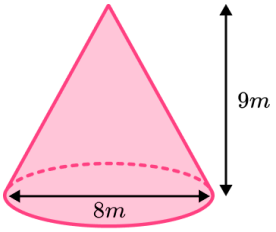
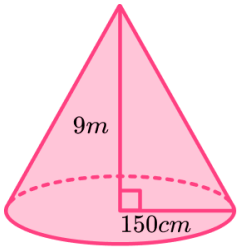
Volume of a Cone - Answers

Group C contd	**6)**  **7)**  **8)**  **9)**  	**6)** $209.44m^3$ **7)** $1385.44cm^3$ **8)** $0.32km^3$ **9)** $4.71km^3$

Volume of a Cone - Answers

	Question	Answer
	Applied Questions	
1)	**a)**  Work out the volume of the cone above. Diagrams are NOT to scale. Leave your answer in terms of π. **b)** Convert your answer in (a) to 3 significant figures	**a)** $421.17\pi cm^3$ or $\frac{2527}{6}\pi cm^3$ **b)** $1320cm^3$
2)	**a)**  Work out the volume of the cone above. Diagrams are NOT to scale. Give your answer correct to 3 significant figures. **b)** Convert your answer in (a) to mm^3 to 3 significant figures	**a)** $75.4cm^3$ **b)** $75400mm^3$
3)	 Work out the volume of the cone above. Diagrams are NOT to scale. Give your answer correct to 3 significant figures.	$670cm^3$

Volume of a Cone - Mark Scheme

	Question	Answer	
	Exam Questions		
1)	Here is a cone. Calculate the volume of the cone. Give your answer to 2 d.p. 	Volume of a cone $= \frac{1}{3}\pi(5)^2(12)$ $= 314.16cm^3$	**(1)** **(1)**
2)	Here is a cone. Calculate the volume of the cone. Give your answer to 2 d.p. 	Volume of a cone $= \frac{1}{3}\pi(4)^2(9)$ $= 150.80m^3$	**(1)** **(1)**
3)	Here is a cone. Calculate the volume of the cone. Give your answer to 2 d.p. 	150 cm = 1.5m $Volume\ of\ a\ cone = \frac{1}{3}\pi(1.5)^2(9)$ $= 21.21m^3$	**(1)** **(1)** **(1)**