Edulyte

CONE

A cone is a particular shape formed by using a set of line segments or particular lines that can connect a common point called a vertex or Apex point to all the points of a circular base. The distance from the cone's vertex to its base is known as the height of the cone. A cone can be expressed as a three-dimensional shape by nature.

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Q1: What is the formula to find the slant height 'ℓ' of a cone?

A: $\ell = \sqrt{(r^2 + h)}$
B: $\ell = \sqrt{(r^2 - h)}$
C: $\ell = \sqrt{(r^2 + h^2)}$
D: $\ell = \sqrt{(r - h)}$

Q2: What is the ratio of the volume of a cone to the volume of a cylinder with the same base and height?

A: 1:1
B: 1:2
C: 1:3
D: 1:4

Q3: What is the formula for calculating the lateral surface area of a cone?

A: $A = \pi r^2$
B: $A = \pi r$
C: $A = \pi r \ell$
D: $A = 2\pi rh$

Q4: What is the Formula for the Total Surface Area of a Cone?

A: $TSA = \pi r (r + l)$
B: $TSA = \pi r (r + l)^2$
C: $TSA = \pi r (r + r)$
D: $TSA = \pi r (r + l)^3$

Q5: What is the Formula for the Volume of a Cone?

A: $V = (⅓)\pi$
B: $V = (⅓)\pi r^2 h$
C: $V = (⅓)\pi r^2$
D: $V = (⅓)\pi r$

Q6: Calculate the Volume of a Cone with a Radius of 3 cm and Height of 7 cm

A: 66 cm
B: 66 cm^2
C: 66 cm^3
D: 66 cm^4

Q7: Calculate the Surface Area of a Cone with a Radius of 7 cm and a Slant Height of 3 cm

A: 250 cm
B: 250 cm^2
C: 220 cm
D: 220 cm^2

Q8: How to Calculate Volume of Cone when Height and Diameter Given?

A: $V = (1/12)\pi d^2 h$
B: $V = (1/12) d^2 h$
C: $V = (1/12)\pi d^2$
D: $V = (1/12)\pi d$

Q9: Calculate the Volume of a Cone with a diameter of 7 cm and Height of 12 cm

A: 154 cm
B: 154 cm^3
C: 154 cm^2
D: None of these

Q10: Calculate the Lateral Surface Area of a Cone with a Radius of 10 cm and a Slant Height of 5 cm

A: 157 cm
B: 157 cm^3
C: 157 cm^4
D: 157 cm^2

Answers

Q1: C - $\ell = \sqrt{(r^2 + h^2)}$

Q2: C - 1:3

Q3: C - $A = \pi r \ell$

Q4: A - TSA = $\pi r\ (r + l)$

Q5: B - $V = (⅓)\pi r^2 h$

Q6: C - 66 cm^3

Q7: D - 220 cm^2

Q8: A - $V = (1/12)\pi d^2 h$

Q9: B - 154 cm^3

Q10: D - 157 cm^2