



MATHS

BOOKS - INDEPENDENTLY PUBLISHED MATHS (ENGLISH)

THREE DIMENSIONAL GEOMETRY

Examples

1. The length , Width , and height of right prism are 9,4 and 2, respectively .what is the



2. A sphere with diameter 10 meters is inscribed in a cube .What is the volume of the space between the sphere and the cube ?

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3. A Cylinder has a volume of 500 in^3 . What is the radius of this cylinder if its altitude equals the diameter of its base ?



4. IF the volume of a right circular cone is reduced by 15% by reducing its height by 5%, by what percent must the radius of the be reduced ?

5. The distance between two points in space A(2, y, -3) and (1, -1, 4) is 9. Find the possible values of y.

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6. Describe the graph of the set of points

(x, y, z) where

$${\left({x - 6} \right)^2} + {\left({y + 3} \right)^2} + {\left({z - 2} \right)^2} = 36$$

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7. Describe the graph of the set of points (x, y, z) where $x^2 + z^2 = 1$. Watch Video Solution

8. If the segment of the line y = -2x + 2that lies in quadrant I is rotated about the yaxis , a cone is formed . What is the volume of the cone ?



1. The figure below shows a right circular inscribed in a cube with edge of length x. What is the ratio of the volume of the cylinder to the volume of the cube ?



A.
$$\frac{2}{3}$$

B. $\frac{3}{4}$
C. $\frac{\pi}{4}$
D. $\frac{\pi}{2}$

Answer: C



2. The volume of right circular cylinder is the same numerical as its total surface area .Find the smallest integral value for the radius of the cylinder .

A. 1

B. 2

D. 4

Answer: C

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3. The length , Width , and height of a rectangular solid are 5 cm , 3cm and 7 cm respectively. What is the length of the longest segment whose endpoints are vertices of the rectangular solid ?

A. 5.8cm

B. 7.6cm

C. 8.6 cm

D. 9.1

Answer: D

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4. The distance between two points in space , P(x, -1, -1) and Q(3, -3, 1) , is 3 .find the possible values of x.

A. 1 or 2

B. 2 or 3

C.-2 or 3

D. 2 or 4

Answer: D

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5. The point `(-4,0,7) lies on the

B. xy plane

C. yz plane

D. xz plane

Answer: D

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6. The region in the first quadrant bounded by the line 3x + 2y = 7 and the coordinate axes is rotated about the x-axis .What is the volume of the resulting solid ? A. 8 units 3

B. 20 units³

C. 30 $units^3$

D. 40 $units^3$

Answer: C

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