

Final Review: Part III; Chapters 12-13

1. The base of a prism is an equilateral triangle with sides 6m. If the height of the prism is 10m, find the lateral area, total area, and volume of the prism.
2. Find the lateral area, total area, and volume of the square pyramid with base edge of 12 and height of 8.
3. Find the lateral area, total area, and volume of the cone with radius 4cm and height 3cm.
4. The base of a prism is a regular hexagon with sides 4in. If the height of the prism is 8in, find the lateral area, total area, and volume of the prism.
5. The area of a sphere is 144π . Find its volume.
6. The total area of a cube is 150 m^2 .
 - a. Find the length of an edge.
 - b. Find the volume.
7. Two similar pyramids have lateral edges 16 and 20.

What's the ratio of:

 - a. lateral areas?
 - b. perimeters of bases?
 - c. base edges?
 - d. volumes?
 - e. total areas?

8. The ratio of the volumes of two similar solids is 8:27. What is the ratio of:
a. corresponding sides?

b. perimeters of bases?

c. base edges?

d. lateral areas?

e. total areas?

10. Find the lateral area, total area, and volume of the cylinder with radius 3m and height 8m.

11. Find the length of \overline{AB} , the midpoint of \overline{AB} , and the slope of \overline{AB} if A(-3, 2) and B(1, 8)

12. Find the equation of the circle with center at (4, -5) and radius $3\sqrt{2}$.

13. Find the equation of the line going through (-3, 2) and perpendicular to $3x - 2y = 6$

14. Write the equation of the circle with center (1, 8) and passes through (-4, 3).

15. Find the equation of the circle whose diameter extends from A(6,-5) to B(-2, 1).

16. Find the equation of the line going through (-2, 4) and (5, 3).

17. Points (3, 2) and (-2, y) lie on a line with slope $\frac{3}{2}$. Find y.

18. If $M(-5,2)$ is the midpoint of \overline{AB} where the coordinates of A are $(1,-7)$, find the coordinates of B.

19. A line with slope 5 passes through $(1, -8)$ and $(x, 14)$. Find x .