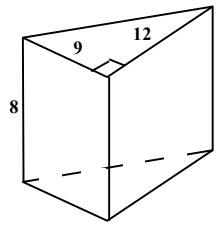
GEOMETRY Ch. 12 Name:_____

Test Review Date:_____Per:____

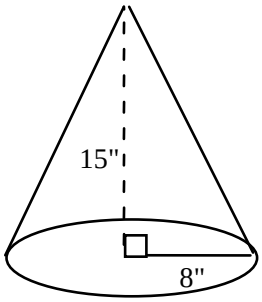
Find the volume and surface area of the following figures. **Show all work**

1.



B =_____ P = _____ h = _____
surface area: _____ vol:_____

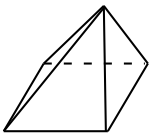
2.



surface area: _____ vol:_____

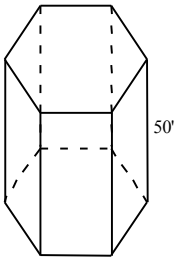
3. Square base pyramid with base edge = 12 and slant ht = 10

B =_____ P = _____ h = _____ ℓ = _____
SA: _____ Vol:_____

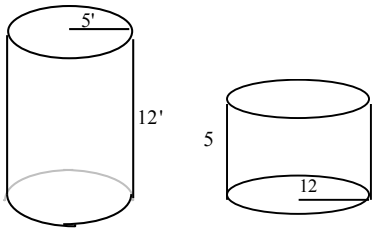


4. Regular hexagon base with perimeter of base = 60 and height of prism = 50

B =_____ P = _____ h = _____
SA: _____ Vol:_____



5. Which cylinder has the greater volume? Show all work leading to your answer.



6. A sphere with a radius of 8 cm is inscribed in a cube. Find the volume outside the sphere but inside the cube.

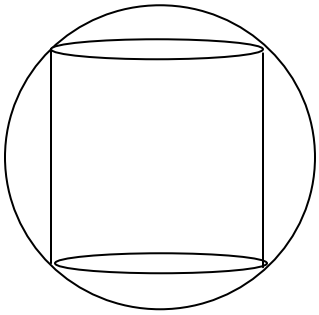
7. A pyramid has a regular hexagonal base with area = 125. The height of the pyramid = 12.

   a) Find the volume of the pyramid

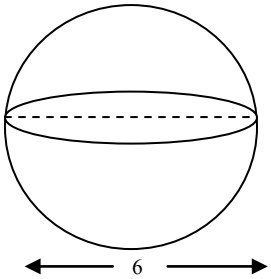
   b) Find the volume of a prism with the same base area and height as the pyramid.

8. A cone with radius 4 has a surface area of 36π. Find the height of the cone.

9. A cylinder is inscribed in a sphere. If the radius of the sphere is 13 and the diameter of the cylinder is 10, find the volume of the cylinder.

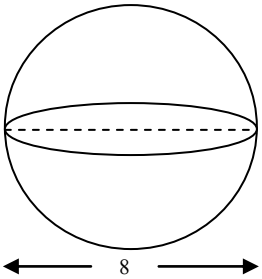


10.



surface area: _____ vol:_____

11.



surface area: _____ vol:_____

12. Find the following ratios for two **similar** figures.

a) If the scale factor is 5:12, then the area ratio is _____.

b) If the volume ratio is 125:8, then the scale factor is _____.

c) If the area ratio is 16:9, then the volume ratio is _____.

13. Two figures have a scale factor of 3:4. If the area of the larger is 100 square units, what is the area of the smaller?

14. Two prisms are similar. Their ratio of similarity is 4:9.

a) If an edge of the larger prism is 24 units, find the length of the corresponding edge of the smaller prism.

b) If the volume of the smaller prism is 12 units, find the volume of the larger prism.