

NAME

Key

DATE

SCORE

**Practice 49****Chapter 12 Practice**

1. A rectangular solid with height 3 has a square base with side 5.  
Find the volume and total area.  
volume = 75, total area = 110
2. A regular square pyramid has base edge 6 and height 4. Sketch the pyramid and find the following values.  
slant height = 5  
lateral area =  $60$   
volume =  $48$
3. A cylinder has radius 3 m and height 7 m. Find the volume of the cylinder.  $63\pi \text{ m}^3$
4. Wrapping paper is to be glued to the cylinder in Exercise 3 so that the cylinder is completely covered, including the bases. Find the amount of paper needed.  $16\pi \text{ m}^2$
5. Find the lateral area of a cone with radius 4 and height 4.  $16\pi\sqrt{2}$
6. A cone of radius 5 has volume  $75\pi$ . Find the height of the cone.  
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7. Find the area and volume of a sphere with radius 5.  
area =  $100\pi$ , volume =  $\frac{500\pi}{3}$
8. Find the volume of a sphere with area  $36\pi$ .  $36\pi$
9. Two right cylinders have radii 25 and 55, and heights 10 and 22, respectively. Are the cylinders similar? yes
10. Two similar cones have radii in the ratio 2:5. Find the ratios of the following:  
a. slant heights 2:5    b. lateral areas 4:25  
c. volumes 8:125
11. Two similar pyramids have lateral areas 72 and 98. The height of the smaller pyramid is 12. Find the height of the larger pyramid.  
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