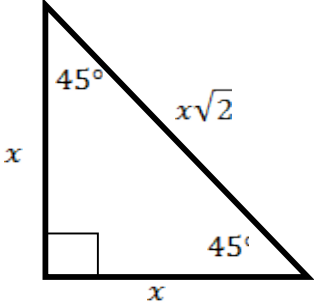
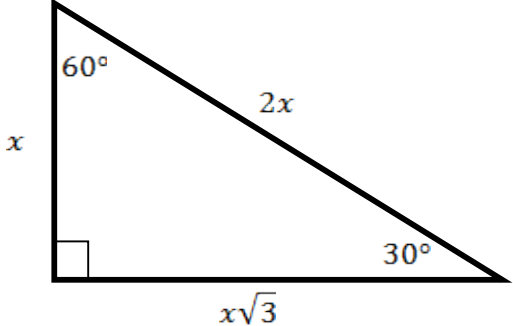
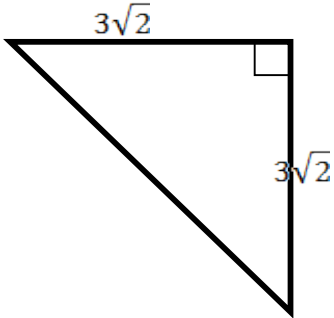
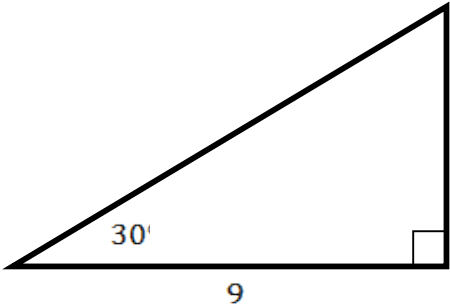


# GEOMETRY REVIEW

DAY 1

| 45° – 45° – 90° Triangles  | 30° – 60° – 90° Triangles  |
|--|--|
| <p>In a 45° – 45° – 90° triangle, the hypotenuse is <math>\sqrt{2}</math> times as long as each leg.</p>  | <p>In a 30° – 60° – 90° triangle, the hypotenuse is twice as long as the shorter leg, and the longer leg is <math>\sqrt{3}</math> times as long as the shorter leg.</p>  |
| <p>1. Find the lengths of the missing side(s).</p>   | <p>2. Find the lengths of the missing side(s).</p>    |

**Area of a Triangle:** Area of a triangle:  $A = \frac{1}{2}bh$

Area of an Equilateral Triangle:  $A = \frac{s^2\sqrt{3}}{4}$

|   |  |
|---|--|
| <p>3. Find the area of an equilateral triangle with side length of 6.</p> | <p>4. Find the area of an equilateral triangle with side length of <math>\sqrt{6}</math></p> |
|---|--|

Cylinder

$$S = 2\pi r^2 + 2\pi rh$$

$$V = \pi r^2 h$$

Cone

$$S = \pi r^2 + \pi rl$$

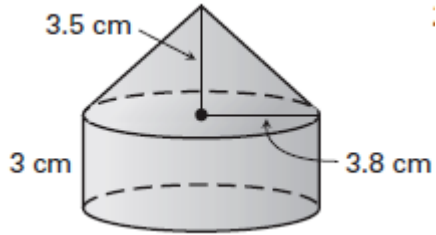
$$V = \frac{1}{3}\pi r^2 h$$

Sphere

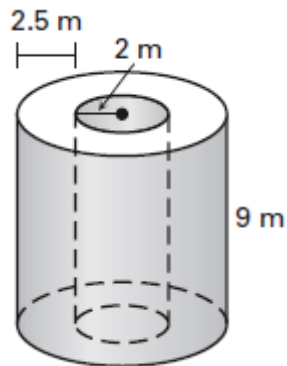
$$S = 4\pi r^2$$

$$V = \frac{4}{3}\pi r^3$$

5. Find the surface area.



6. Find the volume.



7. Find the radius of the cylinder if the surface area is  $363.6\pi \text{ m}^2$  and the height of the cylinder is  $11.2 \text{ m}$ .

8. A grain storage tank is in the shape of a cylinder covered by a half sphere. The height of the cylinder is 50 feet and its diameter is 80 feet. Find the total surface area (including the base) and volume of the tank.

9. The surface area of a cylinder is  $1000\pi$  square centimeters. The radius of the cylinder is four times the height. What is the height of the cylinder?

10. Find the area of intersection of the sphere and plane. Write your answer in terms of pi.

