

# Geometric Measurement Worksheet 3 - Answers

Find the volume of the following figures. Round your answers to the nearest tenth.

1. Compare the volume of a cylinder with a radius of 5 cm and height of 10 cm with the volume of a sphere with radius 5 cm.  
The cylinder is approximately 261.8  $\text{cm}^3$  larger in volume.
2. Compare the volume of a cone and cylinder both with radius 1 in and height 4 in.  
The cylinder ( $12.6 \text{ in}^3$ ) contains three times the volume of the cone ( $4.2 \text{ in}^3$ ).
3. If you have a perfectly shaped snowball with a diameter of 8 cm, and half of it falls off on the way to its target, what's the volume of the remaining snowball?  
 $134.0 \text{ cm}^3$
4. Calculate the volume of helium needed to inflate a spherical latex balloon with a diameter of 18 inches.  
  
It will take about  $3053.6 \text{ in}^3$  of helium to fill the balloon.
5. A cone is enclosed inside a cylinder. The cone and the cylinder have equal bases and equal heights. If the volume of the cone is  $30 \text{ cm}^3$ , what is the volume of the cylinder?  
 $90 \text{ cm}^3$ .
6. A cone is enclosed in one hemisphere of a sphere. The cone and sphere share a radius of  $r$ . The cone's height is also  $r$ . Find the volume of the sphere if the cone has a volume of  $500 \text{ cm}^3$ .  
 $2000 \text{ cm}^3$
7. What is the volume of an oblique rectangular pyramid with a length of 7 cm, a width of 6 cm, and a height of 22 cm?  
 $308 \text{ cm}^3$
8. A square pyramid is contained within a cone. Both share a height of 20 cm. The square base of the pyramid has an edge of 10 cm. What is the volume of the cone?  
 $1047.2 \text{ cm}^3$
9. The top of a cone with a radius of 10 m and height 35 m is cut so that the height of the new solid is 15 m and the radius at the top is 5 m. What is the volume of this truncated cone?  
 $3141.6 \text{ m}^3$
10. Given a cube with an edge of 8 in and a sphere with a diameter of 8 in, calculate the volume remaining in the cube if the sphere is inserted into the cube.  
 $243.9 \text{ in}^3$