Apprenticeship Math 12

ASSIGNMENT: Volume of Spheres, Cones and Pyramids

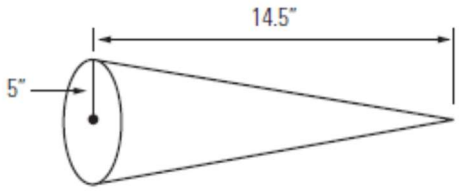
Name: _____

Date: _____

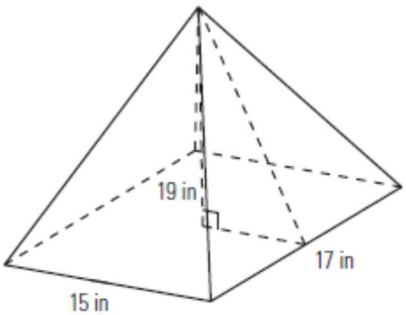
Round your answers to the nearest hundredth!

1. Find the volume of each object.

   a) A sphere with a radius of 8.5 cm. volume = _____

   b) 

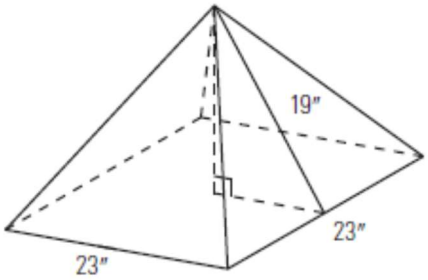
volume = _____

   c) 

volume = _____

d) A sphere with a diameter of 150 mm. volume = _____

e) volume = _____

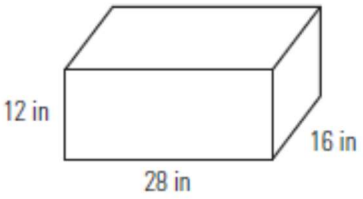


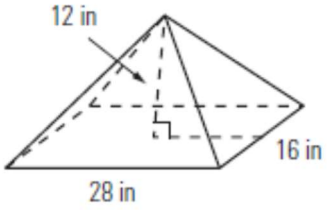
f) A cone with a slant height of 15 cm and a radius of 8 cm. volume = _____

2. A cone has a radius of 12 mm and a volume of 4071.5 mm^3. What is its height?

height = _____

3. Calculate the volume of this prism and pyramid. What would you divide the volume of the prism by to get the volume of the pyramid?



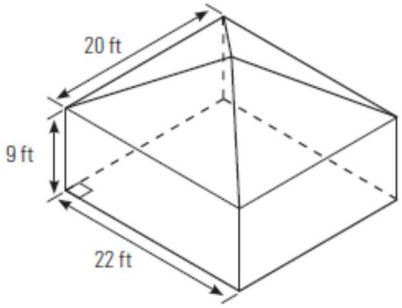


volume of prism = _____

volume of pyramid = _____

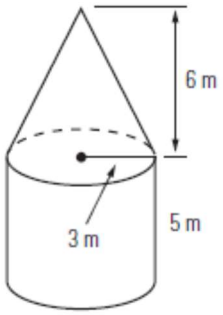
volume of prism ÷ _____ = volume of pyramid

4. What is the volume of the following figure? The height to the peak is 15 ft.



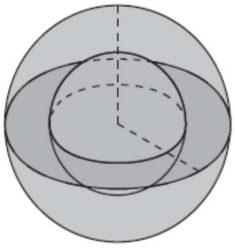
volume = _____

5. Find the volume of the following complex shape.



volume = _____

6. A sphere with a radius of 46 cm is centered inside a sphere with a radius of 76 cm. What is the volume of the space between the two spheres?



volume = _____

1. a) 2572.44 cm^3 b) 379.61 in^3 c) 1615 in^3
   d) 1 767 145.87 mm^3 e) 2666.87 in^3 f) 850.42 cm^3
2. 27.00 mm
3. prism: 5376 in^3, pyramid: 1792 in^3, divide by 3
4. 4840 ft^3
5. 197.92 m^3
6. 1 431 058.29 cm^3