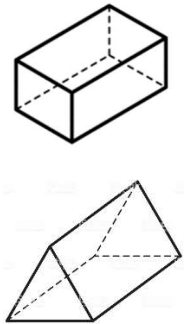

VOLUME Formulas

Prisms:

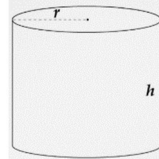


$$V = l \cdot w \cdot h$$

$$V = \frac{l \cdot w \cdot h}{2}$$

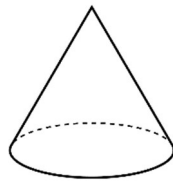
(if triangular)

Cylinders:



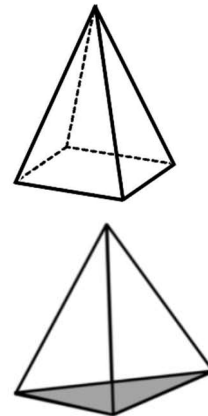
$$V = \pi r^2 h$$

Cones:



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

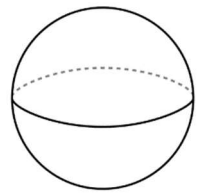
Pyramids:



$$V = \frac{1}{3} Bh$$

(B = area of base)

Spheres:

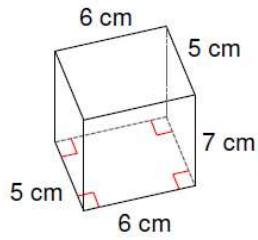


$$V = \frac{4}{3} \pi r^3$$

Prisms

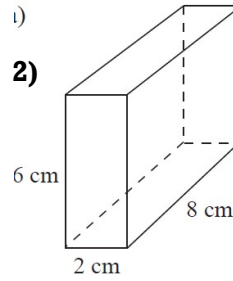
$$V = l \cdot w \cdot h$$

1)

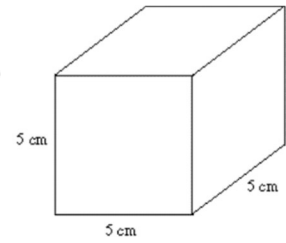


i)

2)

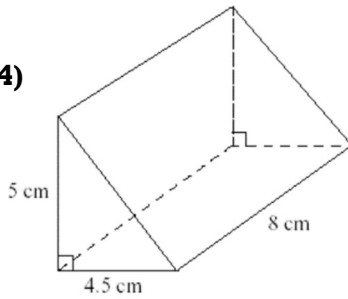


3)

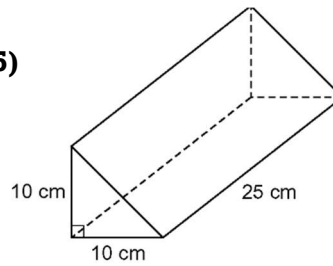


$$V = \frac{l \cdot w \cdot h}{2}$$

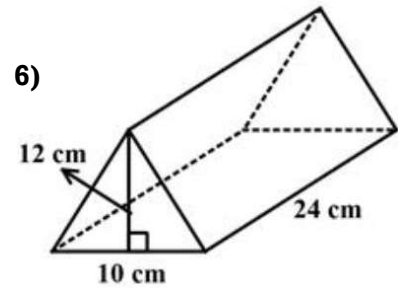
4)



5)



6)

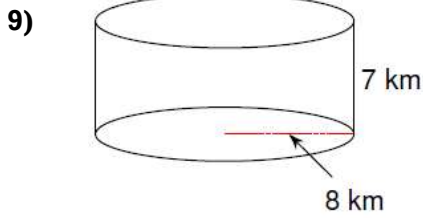


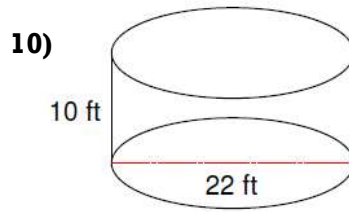
7) A given rectangular prism has a volume = 455 ft³. If the prism has a length of 5 ft. and a length of 7 ft., find the height of the prism.

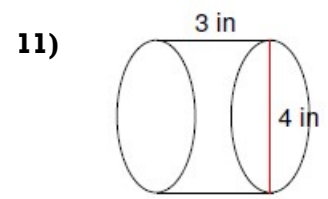
8) A cube has a volume of 857.375 in³. Find the length, width, and height of the cube.

Cylinders

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





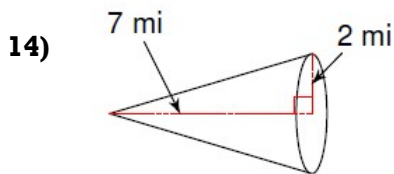


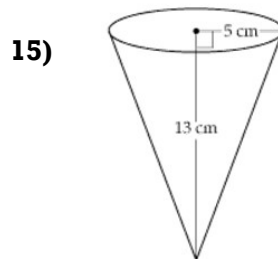
12) A cylinder has a volume of $360\pi \text{ in}^3$. If the cylinder has a height of 10 in., what is its radius?

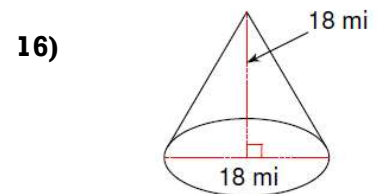
13) A cylinder has a volume of 4580.442 m^3 . If the cylinder has a diameter of 18 m, find its height.

Cones

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







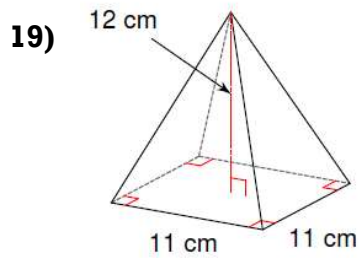
17) A cone has a volume of $121\pi \text{ ft}^3$. If the radius of the cone is 5.5 ft, find its height.

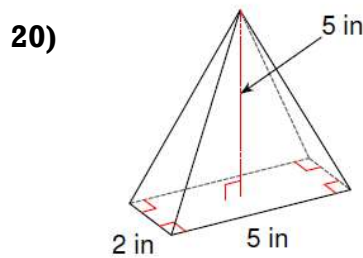
18) A cone with a height of 15 cm has a volume of 141.37 cm^3 . Find the diameter of the cone.

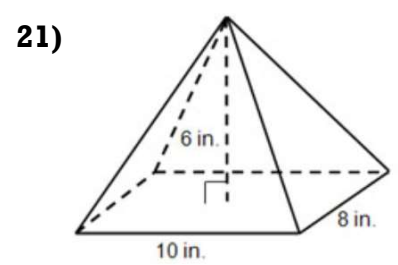
Pyramids

$$V = \frac{1}{3} Bh$$

(B = area of the base)





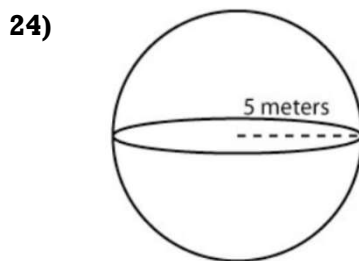


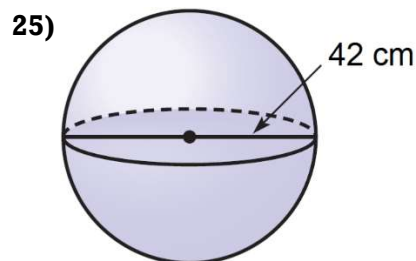
22) A square pyramid has a volume of 512 cm^3 . If the length and width of the base is 8 cm, find it's height.

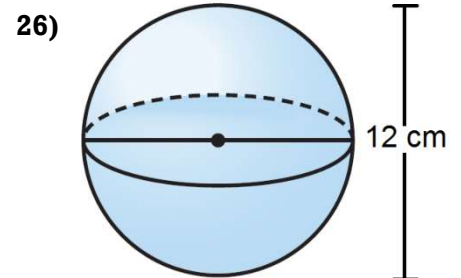
23) A rectangular pyramid has a height of 8.5 ft and a volume of 138.83 ft^3 . What is the area of its base?

Spheres

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







27) The volume of a basketball is 448.92 in^3 . What is the length of its radius?

28) The volume of a baseball is 12.77 in^3 . What is its diameter?

BONUS VOLUME PROBLEMS

If you are feeling pretty confident in finding volume of these solids, try out some of these. If you can complete these, you will have the opportunity to take a bonus quiz that will include similar volume problems.

