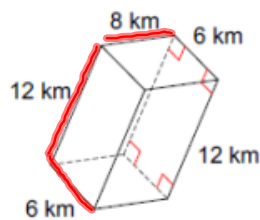


12.5 Volume Homework

Find the volume of each figure. Round your answers to the nearest tenth, if necessary.

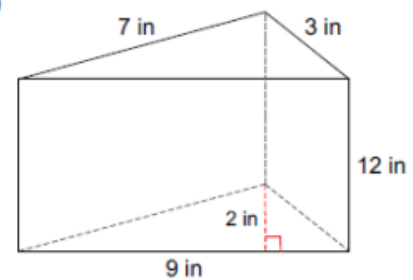
1)



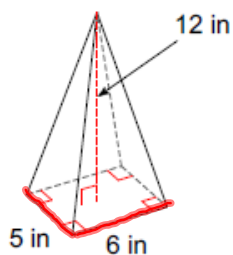
$$L w H$$

$$6 \times 12 \times 8 = \underline{\quad} \text{ km}^3$$

2)



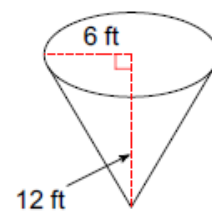
3)



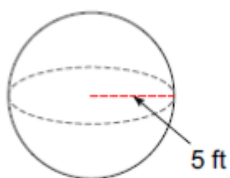
$$V = \frac{1}{3} (L \times w) \times H$$

$$V = \frac{1}{3} (5 \times 6) \times 12$$

4)



5)

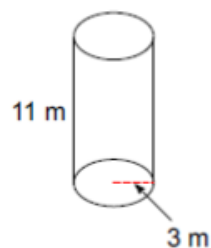


sphere

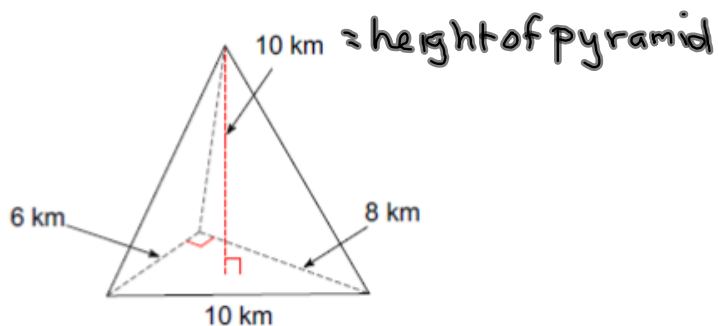
$$V = \frac{4}{3} \pi r^3$$

$$V = \frac{4}{3} (\pi) (5)^3$$

6)



7)



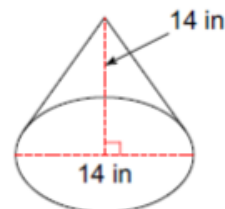
triangular pyramid

$$V = \frac{1}{3} (\frac{1}{2} \text{triangle area} \cdot \text{height of pyramid})$$

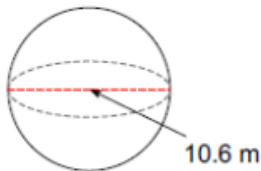
$$V = \frac{1}{3} (\frac{1}{2} b h) (H)$$

$$V = \frac{1}{3} (\frac{1}{2} \times 6 \times 8) (10)$$

8)



9)

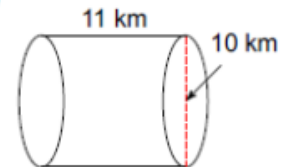


Sphere 10.6 is diameter
 $10.6 \div 2 = \text{radius}$

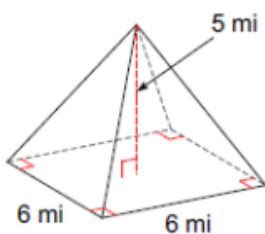
$$V = \frac{4}{3} \pi r^3$$

$$V = \frac{4}{3} \pi (5.3)^3$$

10)



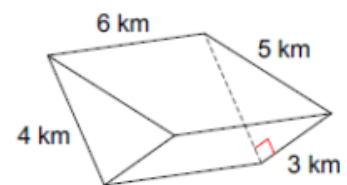
11)



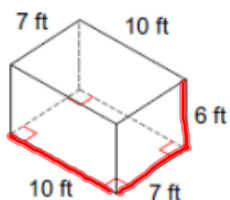
pyramid

$$V = \frac{1}{3} (6)(6)(5)$$

12)



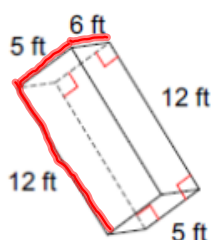
13)



$$V = LWH$$

$$V = 10(7)(6)$$

15)

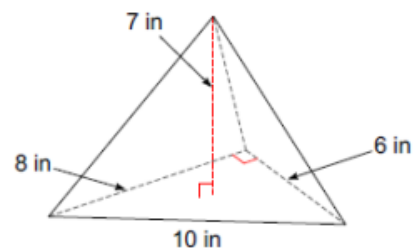


rectangular prism

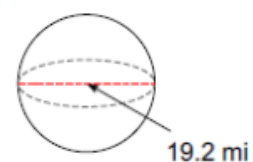
$$V = LWH$$

$$V = (5)(6)(12)$$

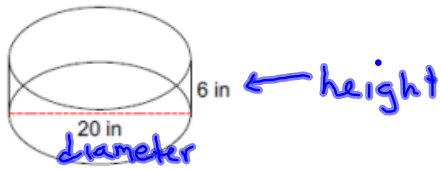
14)



16)



17)



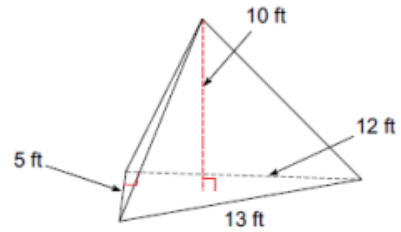
cylinder
diameter is 20 in

radius is $20 \div 2 = 10$ inches

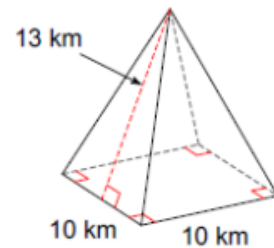
$$V = \pi r^2 h$$

$$V = \pi (10)^2 (6)$$

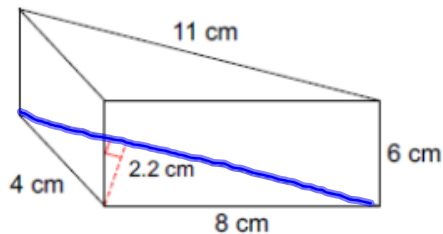
18)



20)



19)



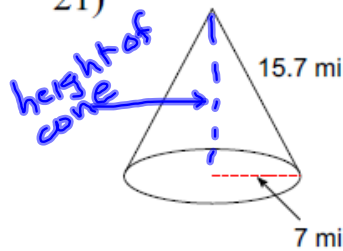
triangular prism

$$V = \left(\frac{1}{2} b h\right) \cdot \text{Height of prism}$$

$V =$ \uparrow 2.2) 6 cm
find base by using $a^2 + b^2 = c^2$
 $4^2 + 8^2 = c^2$

$$V = \frac{1}{2} (\sqrt{4^2 + 8^2}) (2.2) (6)$$

21)



← this is slant height

Find height of cone using

$$a^2 + b^2 = c^2$$

$$7^2 + h^2 = 15.7^2$$

$$h^2 = 15.7^2 - 7^2$$

$$h = \sqrt{15.7^2 - 7^2}$$

Cone

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

$$V = \frac{1}{3} \pi (7)^2 (\sqrt{15.7^2 - 7^2})$$