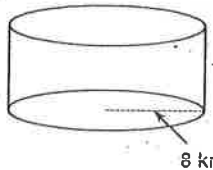
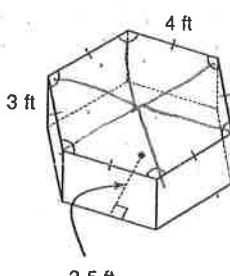


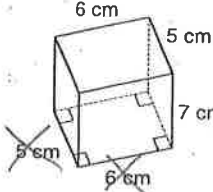
# Solutions KEY

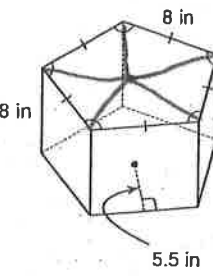
## Volume of Prisms and Cylinders

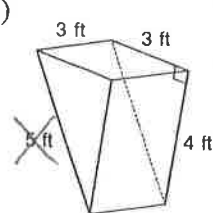
Find the volume of each figure. Round your answers to the nearest tenth, if necessary.

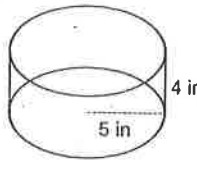
1)   $V = \pi r^2 h$   
 $V = \pi (8)^2 (7)$   
 $V = 1407.4 \text{ km}^3$

2)   $V = A_{\text{base}} \times H$   
 $A_{\text{tri}} = \frac{bh}{2} = \frac{(4)(3.5)}{2} = 7$   
 $A_{\text{base}} = 7 \times 6 \text{ tri's} = 42$   
 $V = 42 \times 3 = 126 \text{ ft}^3$

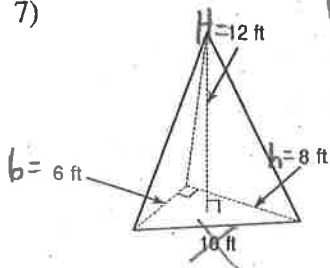
3)   $V = l \times w \times h$   
 $V = 7 \times 5 \times 6$   
 $V = 210 \text{ cm}^3$

4)   $V = A_{\text{base}} \times H$   
 $A_{\text{tri}} = \frac{bh}{2} = \frac{(8)(5.5)}{2} = 22$   
 $A_{\text{base}} = 22 \times 5 \text{ tri's} = 110$   
 $V = 110 \times 8 = 880 \text{ in}^3$

5)   $V = \frac{bh}{2} \times H$   
 $= \frac{(3)(4)}{2} \times 3$   
 $= 6 \times 3$   
 $V = 18 \text{ ft}^3$

6)   $V = \pi r^2 h$   
 $= \pi (5)^2 (4)$   
 $V = 314.2 \text{ in}^3$

7)

96 ft<sup>3</sup>

$$V = \frac{A_{\text{base}} \times H}{3}$$

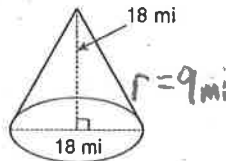
$$A_{\text{base}} = \frac{bh}{2}$$

$$A_{\text{base}} = \frac{(6)(8)}{2} = 24$$

$$V = \frac{24 \times 12}{3}$$

$$V = 96 \text{ ft}^3$$

8)

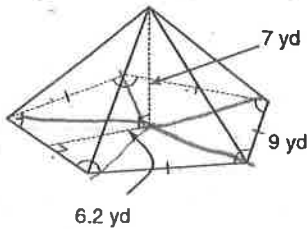
1526.8 mi<sup>3</sup>

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

$$V = \frac{\pi (9)^2 (18)}{3}$$

$$V = 1526.8 \text{ mi}^3$$

9)

325.5 yd<sup>3</sup>

$$V = \frac{A_{\text{base}} \times H}{3}$$

$$A_{\text{tri}} = \frac{bh}{2} = \frac{(9)(6.2)}{2}$$

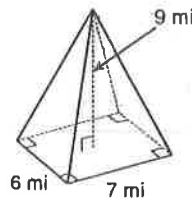
$$A_{\text{tri}} = 27.9$$

$$A_{\text{base}} = 27.9 \times 5 \text{ tri's}$$

$$A_{\text{base}} = 139.5$$

$$V = \frac{139.5 \times 7}{3} = 325.5 \text{ yd}^3$$

10)

126 mi<sup>3</sup>

$$V = \frac{LWH}{3}$$

For rectangular based pyr.

$$V = \frac{(6)(7)(9)}{3}$$

$$V = 126 \text{ mi}^3$$

11) A square pyramid measuring 10 yd along each edge of the base with a height of 6 yd.

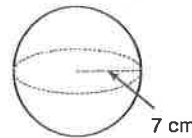
200 yd<sup>3</sup>

$$V = \frac{LWH}{3}$$

$$V = \frac{(10)(10)(6)}{3}$$

$$V = 200 \text{ yd}^3$$

12)



$$1437 \text{ cm}^3$$

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

$$= \frac{4\pi (7)^3}{3}$$

$$V = 1437 \text{ cm}^3$$

13) A cone with radius 4 m and a height of 12 m.

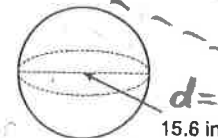
201.1 m<sup>3</sup>

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

$$V = \frac{\pi (4)^2 (12)}{3}$$

$$V = 201.1 \text{ m}^3$$

14)



$$r = \frac{15.6}{2}$$

$$r = 7.8$$

$$1988 \text{ in}^3$$

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

$$V = \frac{4\pi (7.8)^3}{3}$$

$$V = 1988 \text{ in}^3$$