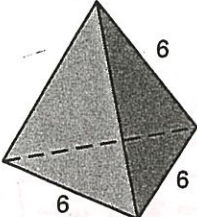
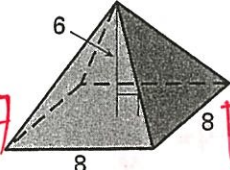


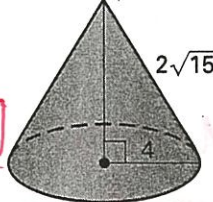
Practice A

For use with pages 752-758

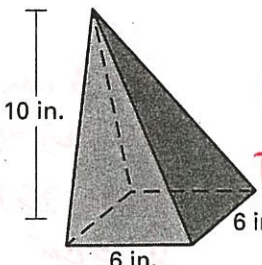
Find the area of the base of the regular pyramid or cone.

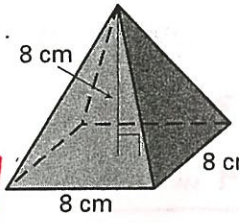
1.  $A = \frac{(6)^2 \sqrt{3}}{4}$
 $A = 9\sqrt{3} \text{ UNITS}^2$

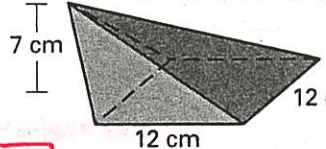
2.  $A = 8 \cdot 8$
 $A = 64 \text{ UNITS}^2$

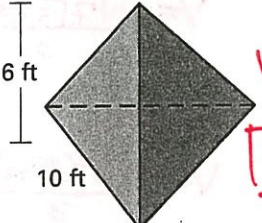
3.  $A = \pi(4)^2$
 $A = 16\pi \text{ UNITS}^2$

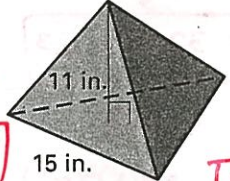
Find the volume of the pyramid. Each pyramid has a regular polygon for a base.

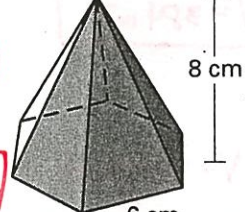
4.  $V = \frac{(6 \cdot 6)(10)}{3}$
 $V = 120 \text{ IN}^3$

5.  $V = \frac{(8 \cdot 8)(8)}{3}$
 $V = \frac{512}{3} \text{ CM}^3$

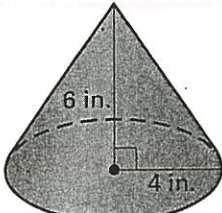
6.  $V = \frac{(12 \cdot 12)(7)}{3}$
 $V = 336 \text{ CM}^3$

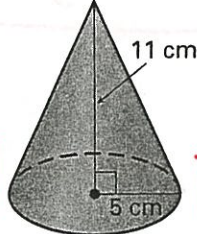
7.  $V = \frac{(10)^2(6)}{3}$
 $V = 50\sqrt{3} \text{ FT}^3$

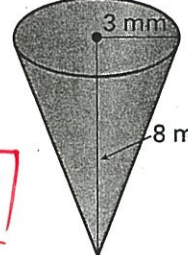
8.  $V = \frac{(15)^2(8)}{3}$
 $V = 206.25\sqrt{3} \text{ IN}^3$

9.  $V = \frac{(36 \cdot 3\sqrt{3})(8)}{3}$
 $V = 144\sqrt{3} \text{ CM}^3$
 Apothem = $3\sqrt{3} \text{ CM}$

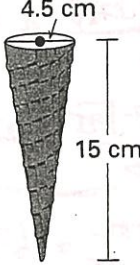
Find the volume of the cone. LEAVE IN π .

10.  $V = \frac{\pi(4)^2(6)}{3}$
 $V = 32\pi \text{ IN}^3$


11.  $V = \frac{\pi(5)^2(11)}{3}$
 $V = \frac{275\pi}{3} \text{ CM}^3$

12.  $V = \frac{\pi(3)^2(8)}{3}$
 $V = 24\pi \text{ MM}^3$

13. **Ice Cream Cone** Find the volume of the ice cream cone shown.

 $r = 2.25 \text{ CM}$
 $V = \frac{\pi(2.25)^2(15)}{3}$
 $V = 25.3125\pi \text{ CM}^3$

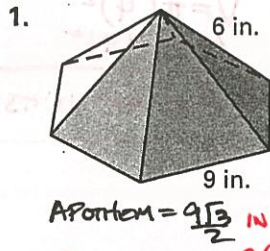
14. **Sand** A truck has hauled 144π cubic feet of sand to a building site. If the sand is dumped into a conical shape 4 feet high, what is the diameter?

 $V = 144\pi \text{ FT}^3$
 $V = \frac{\pi r^2 h}{3}$
 $144\pi = \frac{\pi r^2 (4)}{3}$
 $432\pi = 4\pi r^2$
 $108 = r^2$
 $\sqrt{108} = \sqrt{r^2}$
 $6\sqrt{3} \text{ FT} = r$

Practice B

For use with pages 752-758

Find the area of the base of the regular pyramid or cone.

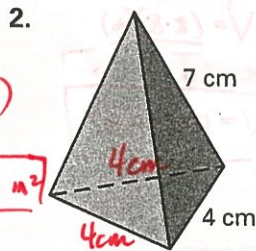


$$A = 54 \left(\frac{\sqrt{3}}{2} \right)$$

$$A = 121.5\sqrt{3} \text{ m}^2$$

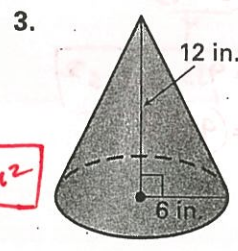
Apotthem = $9 \frac{\sqrt{3}}{2}$ in

Perimeter = $9(6) = 54$ in



$$A = \frac{4^2\sqrt{3}}{4}$$

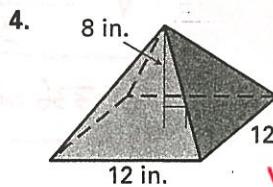
$$A = 4\sqrt{3} \text{ cm}^2$$



$$A = \pi(6)^2$$

$$A = 36\pi \text{ in}^2$$

Find the volume of the pyramid. Each pyramid has a regular polygon for a base.

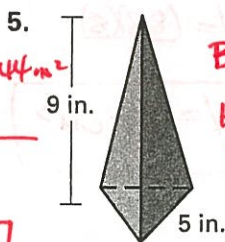


$$B = 12(12) = 144 \text{ m}^2$$

$$H = 8 \text{ in}$$

$$V = \frac{144(8)}{3}$$

$$V = 384 \text{ in}^3$$

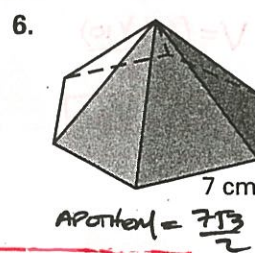


$$B = \frac{25\sqrt{3}}{4} \text{ m}^2$$

$$H = 9 \text{ in}$$

$$V = \frac{25\sqrt{3}(9)}{3}$$

$$V = 18.75\sqrt{3} \approx 32.48 \text{ m}^3$$



$$H = 3 \text{ cm}$$

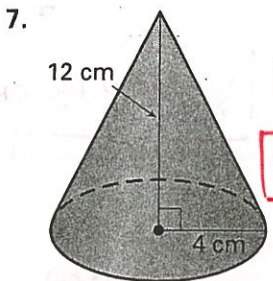
$$P = 7(6) = 42 \text{ cm}$$

$$B = 42 \left(\frac{\sqrt{3}}{2} \right) \text{ cm}^2$$

$$B = 147\sqrt{3} \text{ cm}^2$$

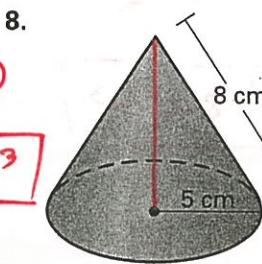
$$V = \frac{147\sqrt{3}(3)}{3}$$

Find the volume of the cone. LEAVE IN π .



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

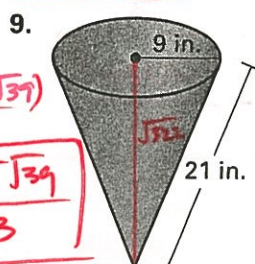
$$V = 64\pi \text{ cm}^3$$



$$H = \sqrt{39}$$

$$V = \frac{\pi(5)^2(\sqrt{39})}{3}$$

$$V = \frac{25\pi\sqrt{39}}{3}$$



$$H = \sqrt{522}$$

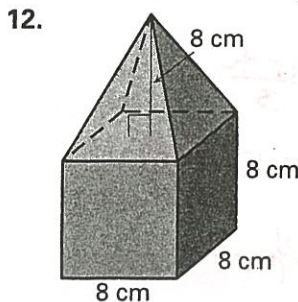
$$V = \frac{\pi(9)^2(\sqrt{522})}{3}$$

$$V = 27\pi\sqrt{522} \text{ m}^3$$

10. ~~Concrete~~ To complete a construction job, a contractor needs 145 more cubic yards of concrete. If there remains a conical pile of concrete mix measuring 36 feet in diameter and 12 feet high, is there enough concrete still on the job site to finish the job? Explain your reasoning.

11. ~~Pyramid~~ The limestone blocks from which an ancient pyramid was made weigh about 2 tons per cubic yard. Find the approximate weight of the pyramid having a square base of length 250 yards and a height of 150 yards.

Find the volume of the solid. Each prism is right.



$$V_{\text{PYRAMID}} = \frac{64(8)}{3}$$

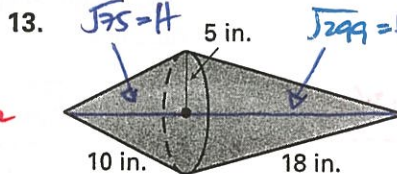
$$V_{\text{PYRAMID}} = \frac{512}{3} \text{ cm}^3$$

$$V_{\text{PRISM}} = 8(8)(8)$$

$$V_{\text{PRISM}} = 512 \text{ cm}^3$$

$$\text{Total } V = \frac{512}{3} + 512$$

$$\text{Total } V = 682.67 \text{ cm}^3$$



ROUND TO NEAREST TENTHS

$$\sqrt{75} = H$$

$$\sqrt{299} = H$$

$$V_{\text{SMALL CONE}} = \frac{\pi(5)^2(\sqrt{75})}{3} \approx 452.7$$

$$V_{\text{SMALL CONE}} = \frac{\pi(5)^2(\sqrt{299})}{3} \approx 226.7$$

$$\text{Total Volume} = 679.4 \text{ m}^3$$