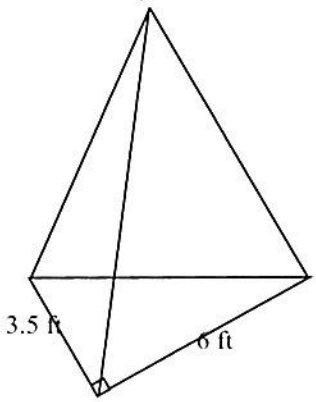
5) The height is 10 ft.

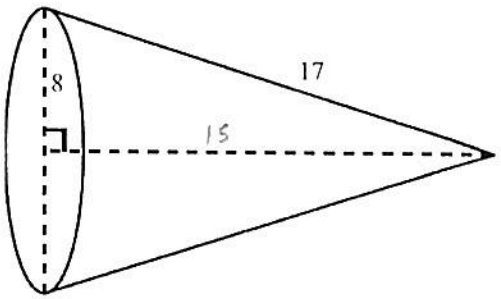


$V = \frac{1}{3}Bh$

$V = \frac{1}{3}\left(\frac{1}{2} \cdot 3.5 \cdot 6\right)(10)$

$V = 35 \text{ ft}^3$

6)



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

$V = \frac{1}{3}\pi (8)^2 (15)$

$V = \frac{1}{3}\pi (64)(15) = 1005.31 \text{ u}^2$

7) What is the volume of a rectangular pyramid whose base has a length of 6.3 cm, a width of 7.4 cm, and whose height is 9.5 cm?

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

$V = \frac{1}{3}(6.3 \cdot 7.4)(9.5)$

$V = 147.63 \text{ cm}^3$

8) What is the volume of a square pyramid whose base has a side length of 13 feet, and whose height is 8 feet?

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

$V = \frac{1}{3}(13 \cdot 13)(8)$

$V = 450.67 \text{ ft}^3$

9) What is the volume of a right circular cone whose height is 15 feet, and whose base has a radius of 6 feet?

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

$V = \frac{1}{3}\pi (6)^2 (15)$

$V = 565.49 \text{ ft}^3$

10) What is the volume of a right circular cone whose height is 20 feet, and whose base has a diameter of 14 feet?

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

$V = \frac{1}{3}\pi (7)^2 (20)$

$V = 1026.25 \text{ ft}^3$

11) If the volume of a pyramid is 342 cm^3, and if the height of the pyramid is 6 units, what is the area of the base?

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

$342 = \frac{1}{3}B(6)$

$\frac{342}{2} = \frac{2B}{2}$

$B = 171 \text{ units}^2$

12) If the volume of a right circular cone is 192π in^3, and if its height is 9 in, what is the radius of the base?

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

$192\pi = \frac{1}{3}\pi r^2 (9)$

$\frac{192}{3} = \frac{3r^2}{3}$

$64 = r^2$ $\quad r = 8 \text{ in}$

13) If the volume of a right circular cone is 96π in^3, and if its height is 8 in, what is the radius of the base?

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

$96\pi = \frac{1}{3}\pi r^2 (8)$

$96\pi = \frac{8}{3}\pi r^2$

$\frac{3 \cdot 96}{8} = \frac{8}{3}r^2 \cdot \frac{3}{8}$

$36 = r^2$

$r = 6 \text{ in}$

14) If the volume of a right circular cone is 1,000 in^3, and if its radius is 6 in, what is the height in terms of pi?

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

$1000 = \frac{1}{3}\pi (6)^2 h$

$1000 = \frac{1}{3}\pi (36) h$

$\frac{1000}{12\pi} = \frac{12\pi h}{12\pi}$

$h = \frac{1000}{12}\pi$