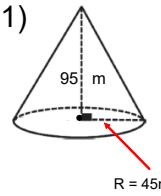
Volume of a Cone and Pyramid

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

1)

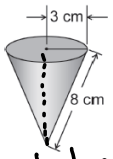


$V = \frac{\pi r^2 h}{3}$

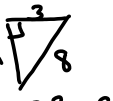
$= \frac{\pi (45)^2 (95)}{3}$

$= 201,454.63 m^3$

2)



① Need height 1st!



$h^2 = 8^2 - 3^2$

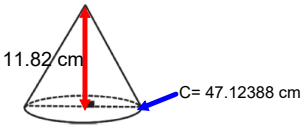
$h^2 = 55$

$h = 7.42$

② $V = \frac{\pi (3)^2 (7.42)}{3}$

$V = 69.93 cm^3$

3)



* $C = \pi D$ OR $C = 2\pi r$

① Find r:

$C = 2\pi r$

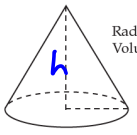
$\frac{47.12388}{2\pi} = \frac{2\pi r}{2\pi}$

$r = 7.5 cm$

② $V = \frac{\pi (7.5)^2 (11.82)}{3}$

$= 696.3 cm^3$

4) Calculate the height of the following cone, given the information below.



* working backwards

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

$383.54 = \frac{\pi (7)^2 h}{3}$

$\frac{383.54}{51.31} = \frac{51.31h}{51.31}$

$h = 7.47 cm$