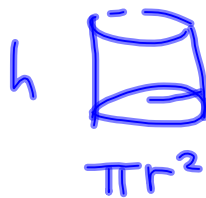


Volume + S.A of Cones 1.4/1.5

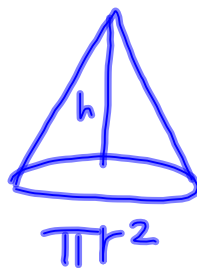
$$V = Ah$$

↑
area of the base

Cylinder



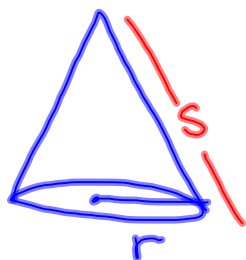
$V = \pi r^2 h$



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

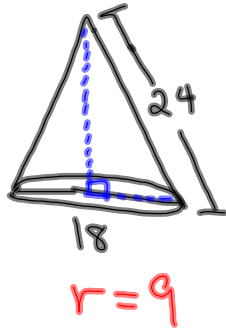
Surface Area (will be given)

$$S.A = \pi r s + \pi r^2$$



Example:

Find the Surface Area and volume of the cone.



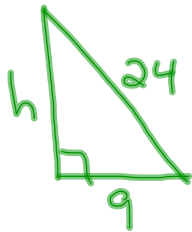
$$S.A = \pi r s + \pi r^2$$

$$\begin{aligned} S.A &= \pi(9)(24) + \pi(9)^2 \\ &= 678.58 + 254.47 \\ &= 933.1 \text{ u}^2 \end{aligned}$$

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



* Need to use pythagorean theorem to solve for height.



$$\begin{aligned} a^2 + b^2 &= c^2 \\ h^2 + 9^2 &= 24^2 \\ h^2 + 81 &= 576 \\ h^2 &= 576 - 81 \\ h^2 &= 495 \\ h &= \sqrt{495} \\ h &= 22.2 \end{aligned}$$

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


$$V = \frac{\pi(9)^2(22.2)}{3}$$

$$= \frac{5649.21}{3}$$


$$= 1883.1 \text{ u}^3$$

Lateral Surface Area

↳ Surface area of the object without the base.



$$\begin{aligned} \leftarrow S.A &= 4 \Delta \\ &= 4 \left(\frac{bh}{2} \right) \end{aligned}$$



$$\leftarrow S.A = \pi r s$$

$$S.A = \cancel{\pi r^2} + \pi r s$$

↑
base

* Finish sheet for homework!