Name: _____

Unit 2 – Measurement

2.9 – Volumes of Solids

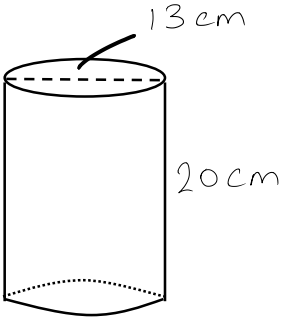
- The ***volume*** of an object is the number of cubic units contained in a solid
  i.e. it is the amount of space an object occupies
  volume is measured in $\boldsymbol{units^3}$ **e.g.** mm^3, ft^3, km^3, in^3, etc.

What do **PRISMS** and **CYLINDERS** have in common?

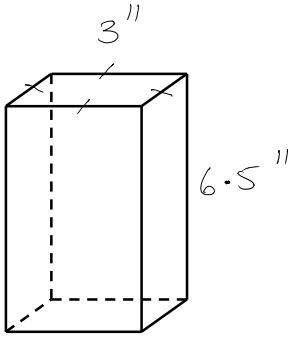
The volume of any **PRISM** or **CYLINDER** can be calculated as follows: $V = \text{base area} \times \text{height}$

Examples: Identify the shape below and calculate the **VOLUME** for each of the figures shown below.

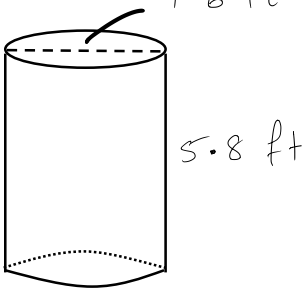
1.



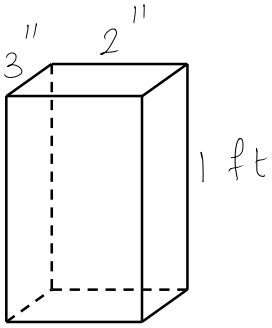
2.



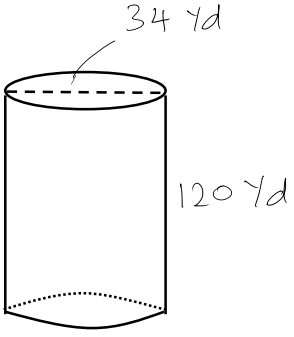
3.



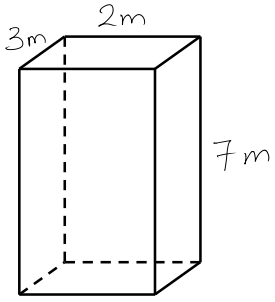
4.



5.



6.

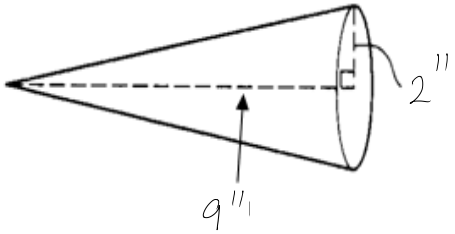


What do **PYRAMIDS** and **CONES** have in common?

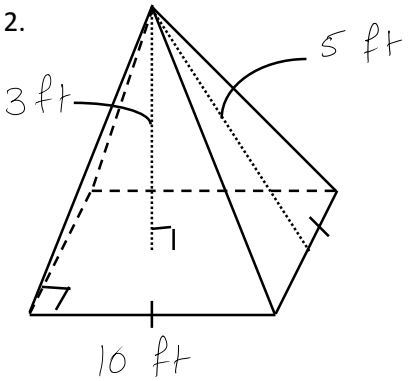
The volume of any **PYRAMID** or **CONE** can be calculated as follows: $V = \dfrac{\text{base area} \times \text{height}}{3}$

Examples: Identify the shape below and calculate the volume for each of the figures shown below.

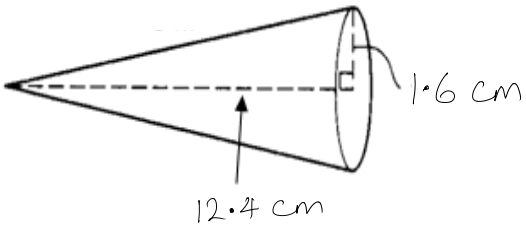
1.



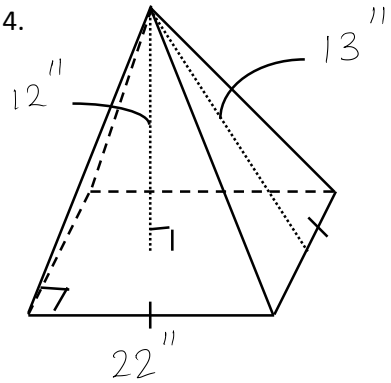
2.



3.



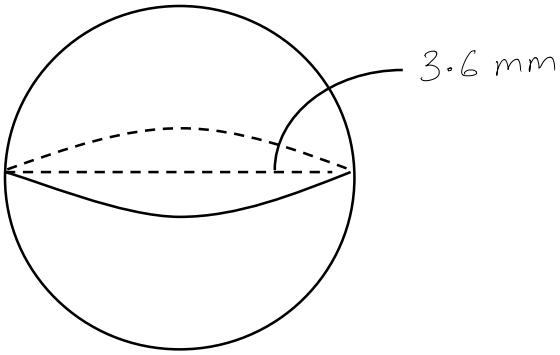
4.



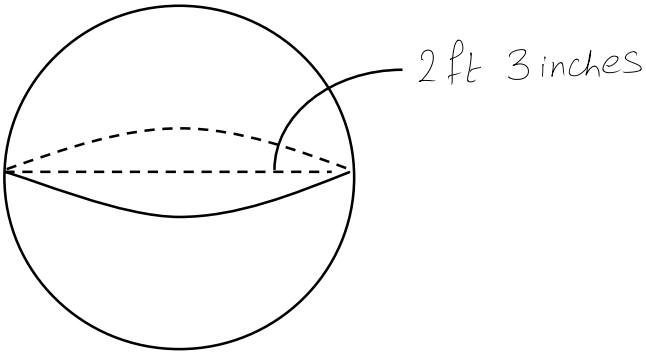
The volume of a **SPHERE** can be calculated as follows: $V = \frac{4\pi r^3}{3}$

Examples: Calculate the volumes for the spheres shown below.

1.



2.



3.