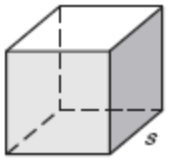
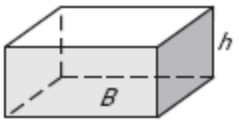
Geometry B 12.4 – Volume of Prisms & Cylinders

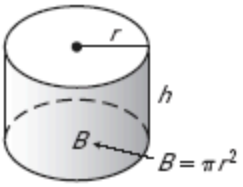
- The **volume** of a solid is the number of _____ units contained in its interior.
- Examples of units could be: _____



$V =$ ____



$V =$ ____



$V =$ ____

POSTULATE 28: VOLUME CONGRUENCE POSTULATE

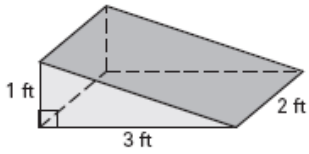
If two polyhedra are congruent, then _____ _____.

POSTULATE 29: VOLUME ADDITION POSTULATE

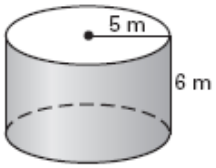
The volume of a solid is the _____ of the volumes of all its nonoverlapping parts.

Example 1: Find the volume of the solid.

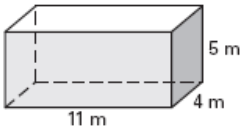
a. Right triangular prism

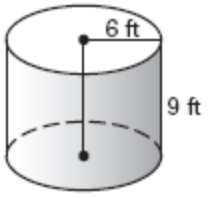


b. Right cylinder

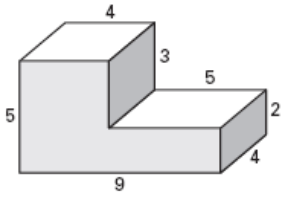


On Your Own 1: Find the volume of the solid.



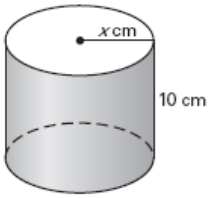


Think about how many unit cubes would fit into the figure?

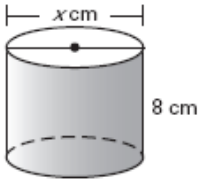


Use the volume of a prism or cylinder

Example 2: The volume of the right cylinder is 1253 cubic centimeters. Find x.

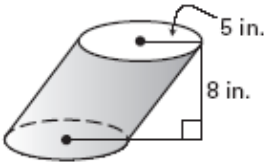


On Your Own 2: The volume of the right cylinder is 200π cm^3. Find the value of x.

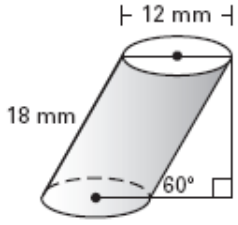


Find the volume of an oblique cylinder

Example 3: Find the volume of the oblique cylinder.

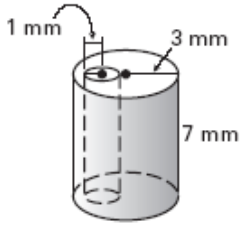


On Your Own 3: Find the volume of the oblique cylinder.



Find the volume of composite solids

Example 4: Find the volume of solid after a solid tube has been carved out of the middle.



On Your Own 4: Find the volume of the composite solid.