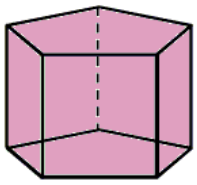
Name: _____ Period: _____ Date: _____

Volumes of Prisms and Cylinders Guided Notes

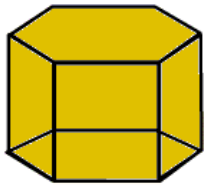
Prism

A prism is a polyhedron with two congruent parallel faces called **bases**. The non-base faces of a prism are called **lateral faces**.

Examples:

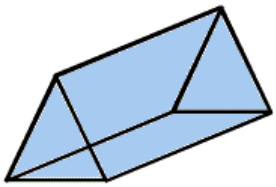


Pentagonal Prism



Hexagonal Prism

Rectangular Prism

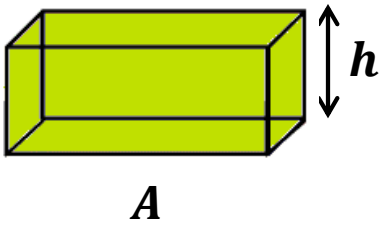


Triangular Prism

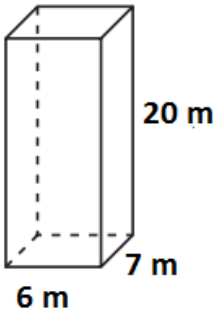
Volume of a Prism

The volume of a prism is the product of the area of the base A and height h of the prism.

$$V = A \times h$$



Problem 1: Find the volume of the prism shown below.



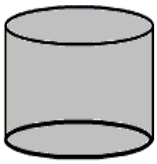
Name: _____ Period: _____ Date: _____

Volumes of Prisms and Cylinders Guided Notes

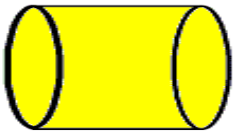
Cylinder

A cylinder is like a prism, but with circular bases.

Examples:



Vertical Cylinder

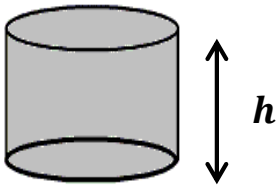


Horizontal Cylinder

Volume of Cylinder

The volume of a cylinder is the product of the area of the circular base $\boldsymbol{A = \pi r^2}$ and height $\boldsymbol{h}$ of the prism.

$$\boldsymbol{V = A \times h} \Rightarrow \boldsymbol{V = \pi r^2 h}$$



$$\boldsymbol{A = \pi r^2}$$

Problem 2: Find the volume of the cylinder shown below. Write the answer in terms of π.