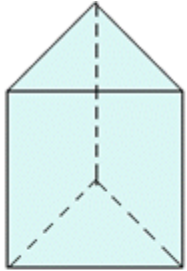
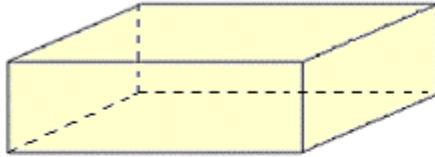


## Volume: Prisms and Cylinders

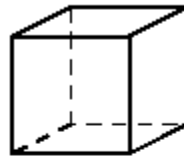
Recall: A prism is a three-dimensional figure with a polygonal base (and matching opposite face) and rectangular sides. Some common examples of prisms are shown below. Depending on the orientation of the prism, the base is not necessarily on the bottom. A cylinder is similar to a prism in that the base and its opposite face are both circles. The difference is that the cylinder has no other 2-dimensional faces. However, if we were to draw the net for a cylinder, the rounded surface is actually a rectangle when it is 'unwrapped'.



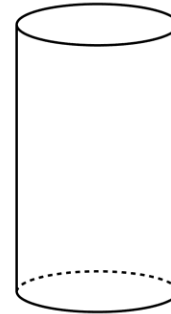
**Triangular Prism**



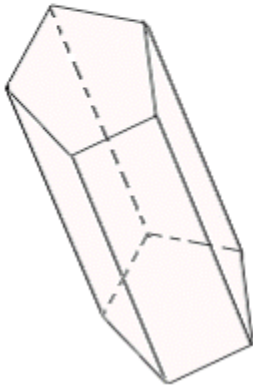
**Rectangular Prism**



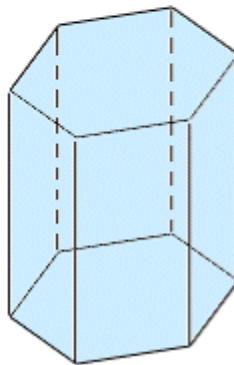
**Cube**



**Cylinder**



**Pentagonal Prism**



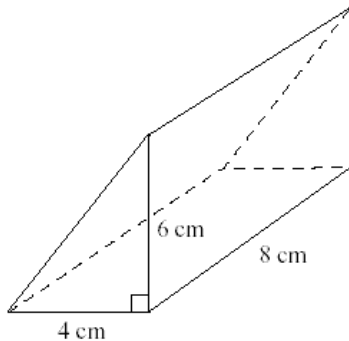
**Hexagonal Prism**

The volume of prisms and cylinders can be found using the following strategy:

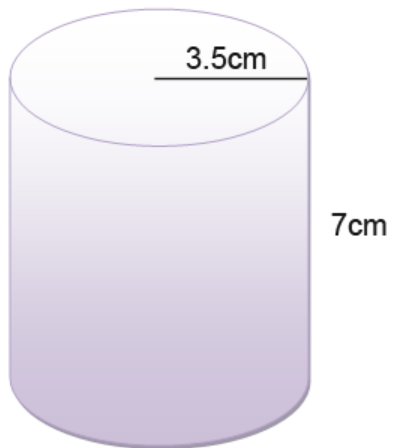
$$\text{Volume} = \text{Area of the base} \times \text{Height/Depth}$$

Example 1 Find the volume of each figure.

a.



b.



Example 2 A hockey puck has a diameter of 3 in. and a height of 1 in. A cylindrical container holds a stack of four pucks. What is the minimum volume of this container, to the nearest cubic centimetre?