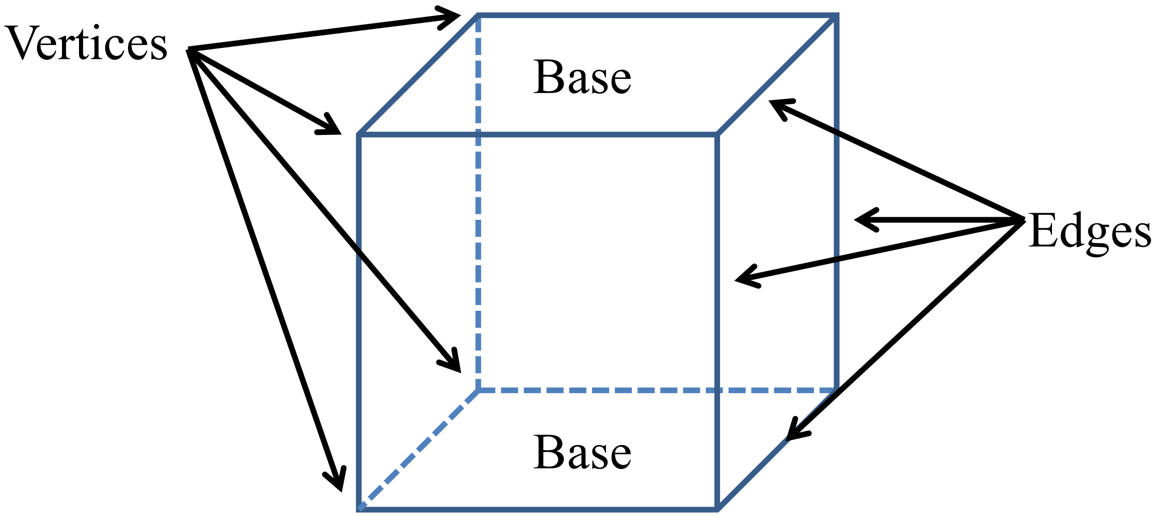
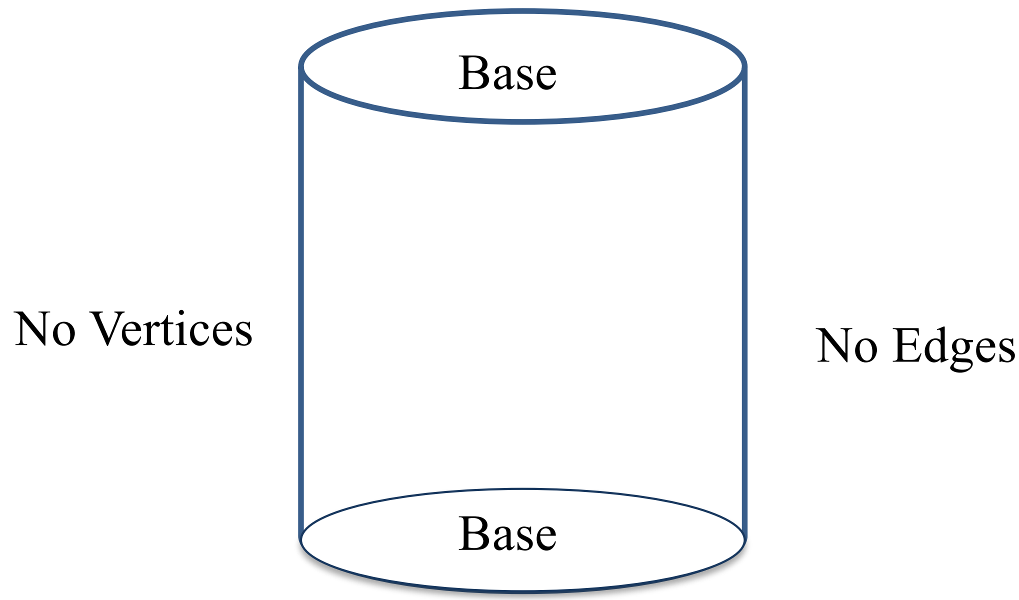


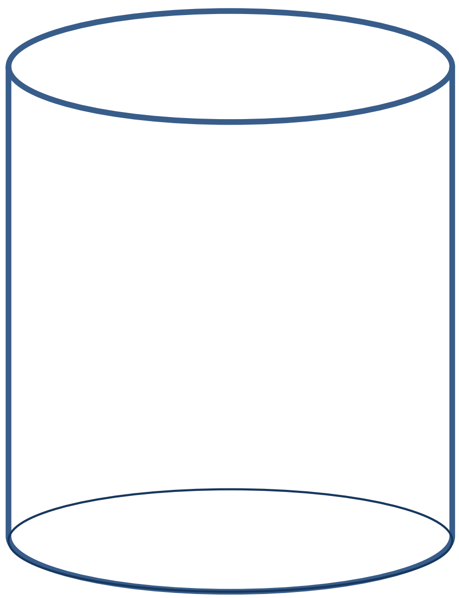
How would we find the surface area of this cylinder?



How would we find the surface area of this cylinder?

$$A_{surface} = A_{bases} + A_{lateral\,area}$$

$$A_{surface} =$$

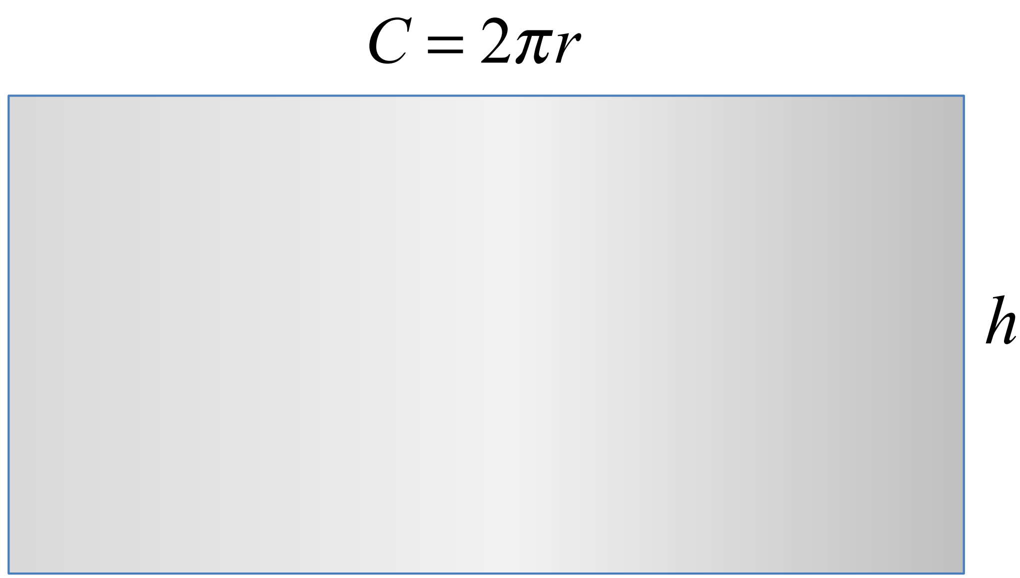


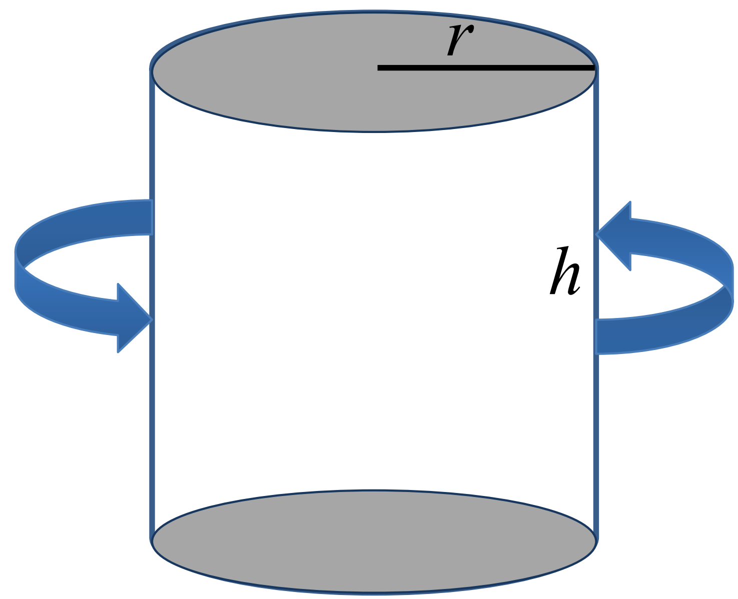
Lateral area or area around the cylinder

How would we find the surface area of this cylinder?

$$A_{surface} = A_{bases} + A_{lateral\ area}$$

$$A_{surface} = 2\pi r^2 + 2\pi rh$$





Lateral area or area around the cylinder

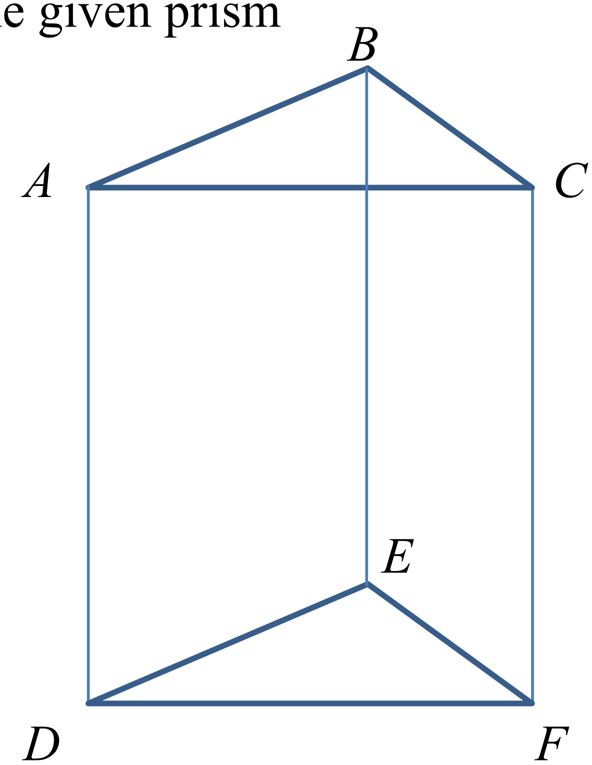
Identify the vertices, edges, and bases of the given prism

Vertices: A, B, C, D, E, F

Edges: $\overline{AB}, \overline{BC}, \overline{AC}, \overline{DE}, \overline{EF}, \overline{DF}$

$\overline{AD}, \overline{BE}, \overline{CF}$

Base: $\triangle ABC, \triangle DEF$

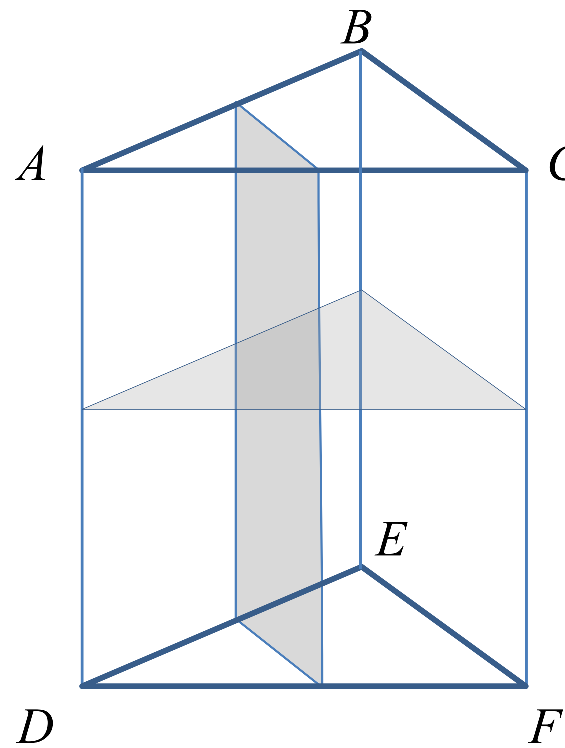


What two-dimensional shape would a vertical ***cross-section*** be?

Rectangle

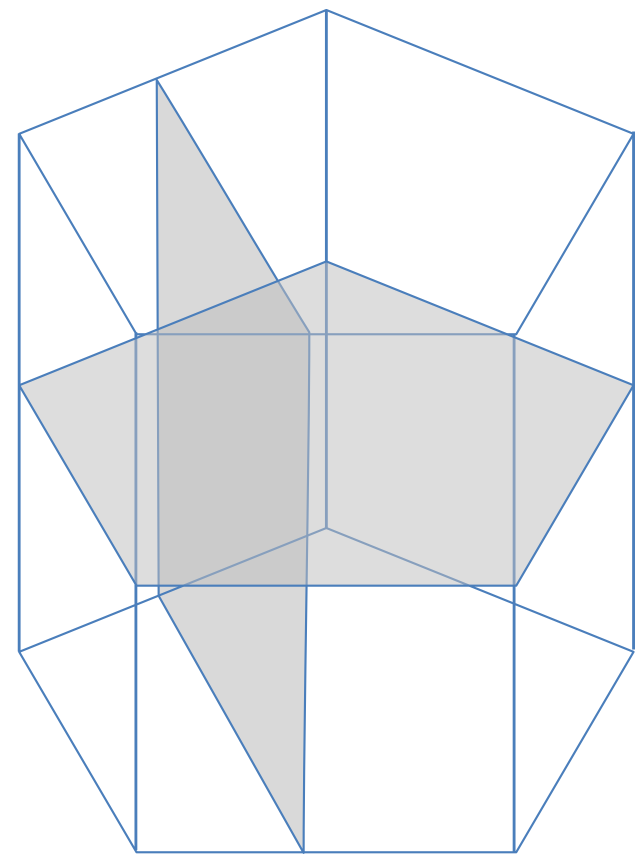
What two-dimensional shape would a horizontal ***cross-section*** be?

Triangle



What two-dimensional shape would a vertical ***cross-section*** be?

Rectangle



What two-dimensional shape would a horizontal ***cross-section*** be?

Pentagon

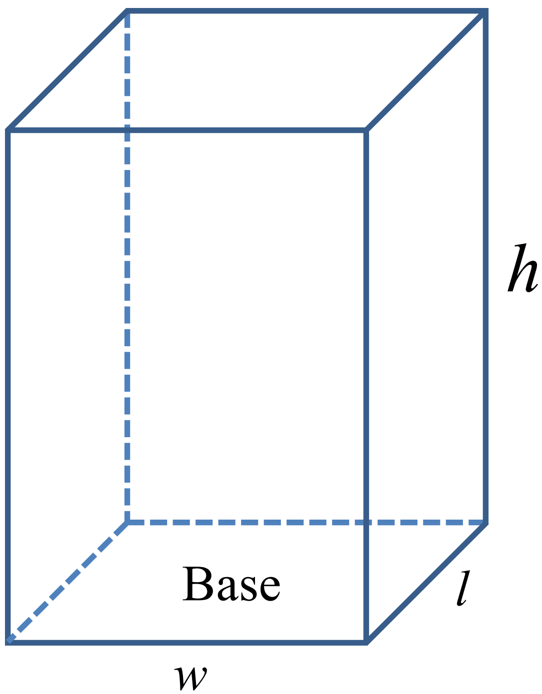
The volume of this prism would be

Area of the base (pentagon) times the height of the prism

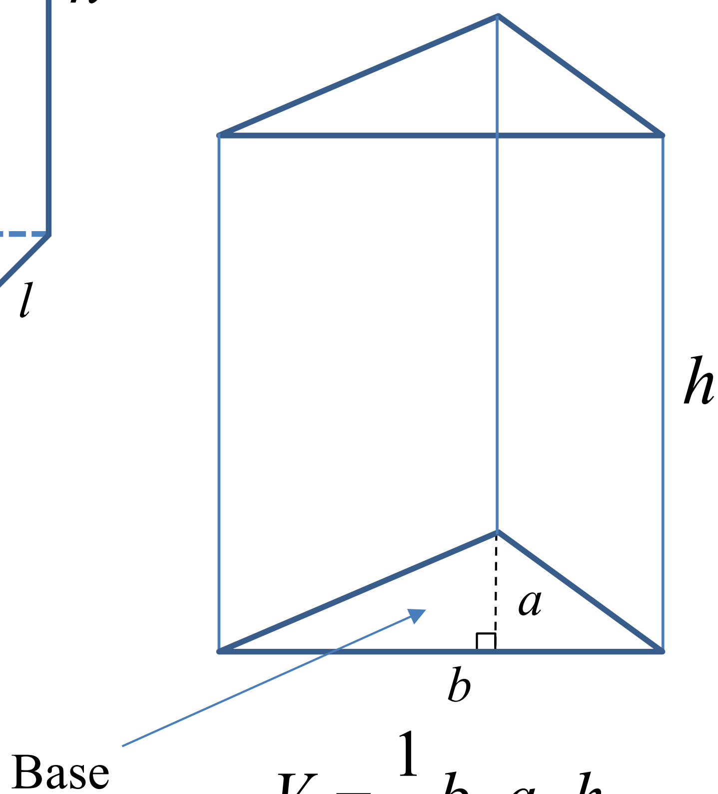
$$V = \left(\frac{1}{2}aP\right)h$$

In the case of prisms and cylinders, the concept of volume is the same: The volume is the product of the area of the base and the height

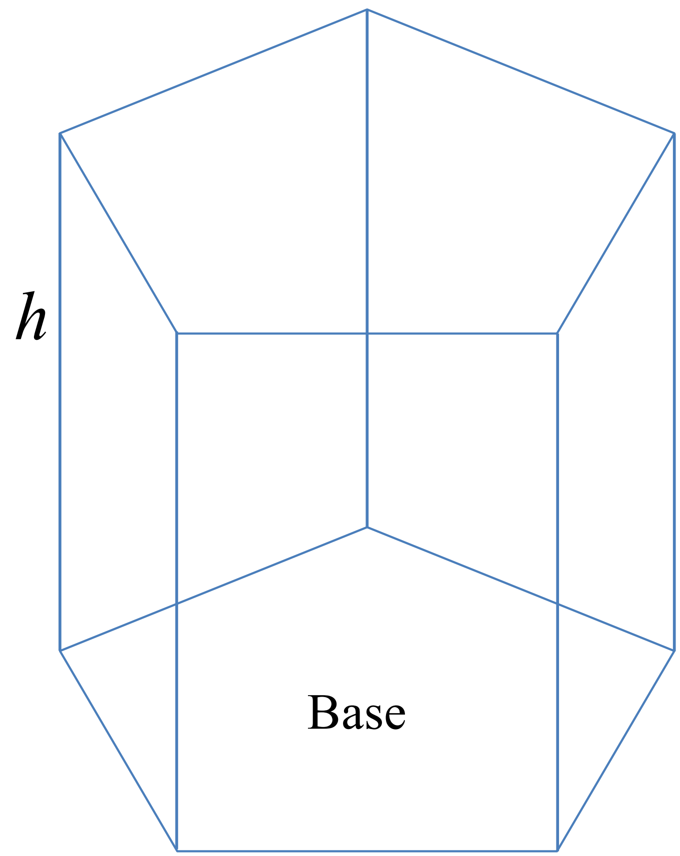
$$Volume = B \cdot h$$



$$V = l \cdot w \cdot h$$



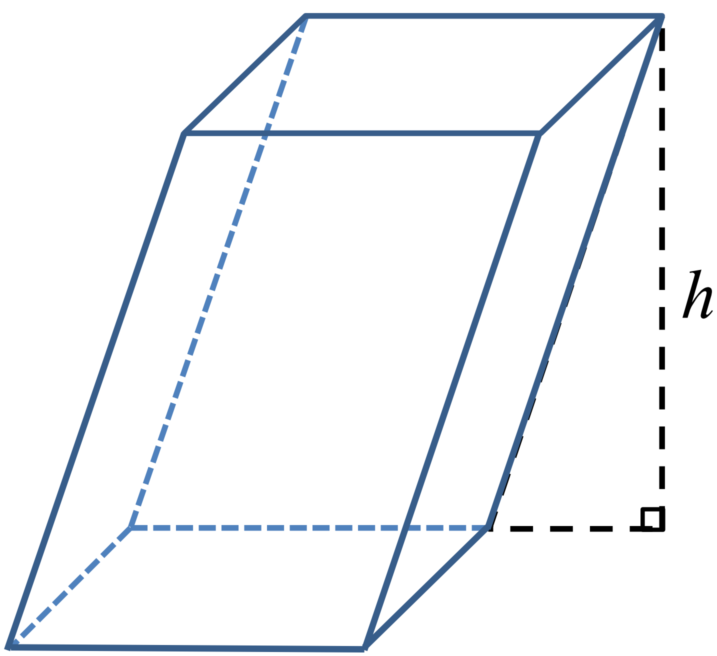
$$V = \frac{1}{2} b \cdot a \cdot h$$



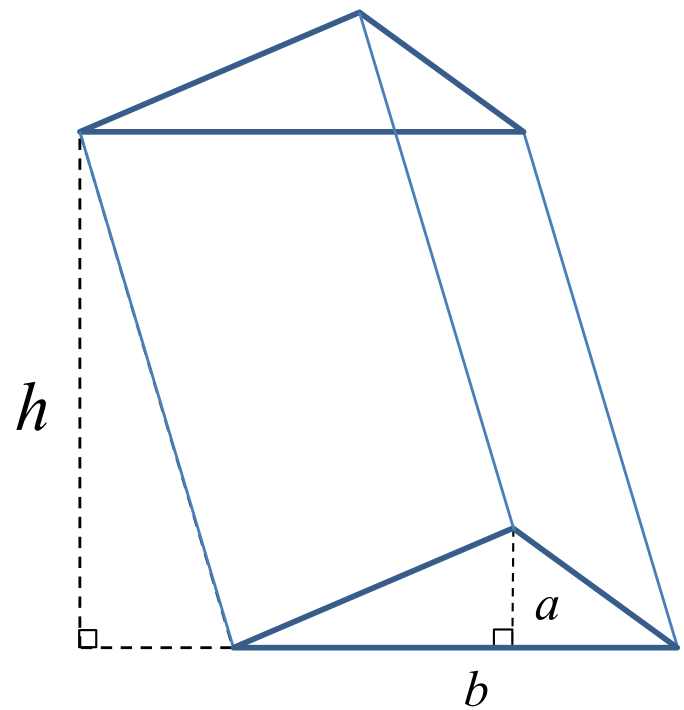
$$V = \left(\frac{1}{2} aP \right) h$$

In the case of non-right prisms and cylinders, the formula does not change but the height can be a little more challenging. We might need to use our knowledge of right triangles

$$Volume = B \cdot h$$



$$V = l \cdot w \cdot h$$



$$V = \frac{1}{2} b \cdot a \cdot h$$

The volume of a cylinder is also a product of the area of the base and the height. Note that not all cylinders are right cylinders so you may have to use right triangles to calculate the height

$$V = \pi r^2 h$$