Objectives
- Right Prisms
- Cylinders

**Note: The algebra activity square stock, rectangular bar, and round stock is needed as well as combination squares.

### Right Prisms
- A three-dimensional shape with two parallel surfaces that are polygons and with sides that create 90° angles
- See geometry formula sheet
- Total surface area – areas of all surfaces (bases and lateral faces); two-dimensional calculation
- Lateral surface area – areas of all surfaces besides the bases (only lateral faces); two-dimensional calculation
- Volume – amount of space the shape fills; three-dimensional calculation

### Example: Find the lateral surface area (as it is shown below), total surface area, and volume of the rectangular bar from the algebra activity.

### Right Prism
- Example: Find the volume and total surface area of the following figure

### Try Yourself
- Find the lateral surface area (as it is shown below), total surface area, and volume of the square stock from the algebra activity.
Try Yourself

Find the weight of the block shown if it is made of steel and steel weighs 0.283 lbs/cu in.

Right Cylinders

Similar to a Right Prism, but the base is a circle
Example: Find the lateral surface area, total surface area, and volume of the cylinder of the 1” diameter round stock from the algebra activity.

Right Cylinder

Which type of container holds more volume? By how much?

A piece of steel piping has an outer diameter of 1½” and inner diameter of 1”. How much would a piece of the piping weigh if it is 30” long and steel weighs 0.283 lbs/cu in.

Try Yourself

Find the lateral surface area, total surface area, and volume of the cylinder of the 1/2 diameter round stock from the algebra activity.

Try Yourself

Find the volume of the following piece. All parts are 0.5” thick. All dimensions are in inches. Hint: There is a missing dimension.