

**Example: Volume of a Cylinder****Problem:**

Find the volume of a cylinder with radius 15 feet and height 10 feet.

**Solution:**

The first step is to decide which surfaces are the bases. These need to be the same size and shape and they must be parallel to each other. In this figure, the circle on the top and the bottom of the cylinder is the base. Each has a radius of 15 feet.

Now that we know what part is the base, we need to find the area of it.

Since it is a circle, we use the area formula for a circle. Area equals pi times the radius squared.

The radius is 15, so the area of the circular base is 225 pi.

The third step is to multiply the area of the base times the height of the figure.

The area of the base is 225 pi and the height is 10, so the volume equals 2250 pi.

As always, the last step is to label your answer. The volume of this cylinder is 2250 pi feet cubed.