# Surface Area of a Cylinder

A cylinder is an object with two parallel, congruent, circular bases.

- How would I illustrate this description using the object shown here?

- How would I describe the *lateral face* or *curved surface* of a cylinder?

- How could I illustrate the two-dimensional shapes that make up a cylinder by drawing a net?

My cylinder is constructed using two congruent circles and a rectangle.
I'll review what I know about circles and rectangles.
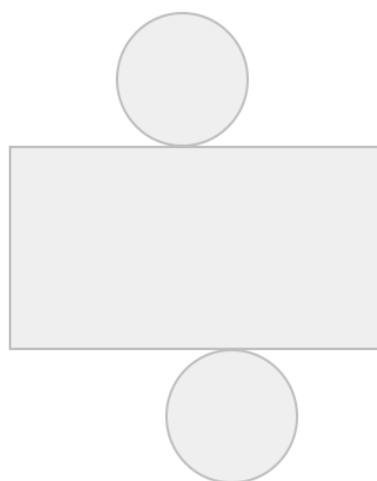
- How would explain and illustrate the *diameter, radius* and *circumference* of a circle?

- How would I explain calculating the circumference of a circle?

- How would I explain calculating the area of a circle?

- I'll use Pi (π) for calculating the circumference and area of a circle. How would I explain or define Pi (π)?

- How will I use the cylinder to determine the dimensions of the rectangular curved surface?

- How would I explain calculating the area of the rectangular curved surface?

- How would I define or describe the surface area of a cylinder?

- How would I explain and demonstrate using the net to calculate the surface area of the cylinder?

3.5 cm

11 cm
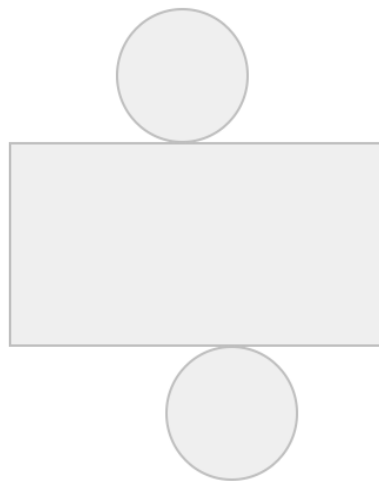
A classmate calculated the surface area of the same cylinder using the formula shown below.

3.5 cm

11 cm

$$2\pi r^2 + 2\pi rh$$

- How would I explain why this formula will allow me to calculate the surface area of the cylinder?

- How would I explain substituting the dimensions of the cylinder into the formula?

- How would I explain evaluating to determine the surface area of the cylinder?

Surface Area of a Cylinder

Which statements do I feel confident explaining and demonstrating?
Which statements do I <u>not</u> feel confident explaining and demonstrating?

✓ I can <u>describe</u> the two-dimensional shapes that make up a cylinder

✓ I can draw a net to <u>illustrate</u> the two-dimensional shapes that make up a cylinder

✓ I can <u>explain</u> the following parts of a circle... diameter, radius, circumference

✓ I can <u>explain</u> how I calculate the circumference of a circle

✓ I can <u>explain</u> how I calculate the area of a circle

✓ I can <u>explain</u> how I determine the dimensions of the rectangular curved surface of a cylinder

✓ I can <u>explain</u> how I calculate the area of a rectangle

✓ I can <u>explain</u> and demonstrate how I use a net to calculate the surface area of a cylinder

✓ I can <u>explain</u> and demonstrate how I use a formula to calculate the surface area of a cylinder