9.3: Surface Area of Cylinders

*A cylinder is a solid that has two parallel, identical circular bases.*

Lateral Surface Area

S = 2$πrh$

Cylinder Surface Area

SA = 2$πr^{2}+2πrh$

Make a net for the cylinder. Then find the surface area of the cylinder. Round your answer to the nearest tenth.

 1.  2. 

Find the surface area of the cylinder. Round your answer to the
nearest tenth.

 3.  4. 

Find the lateral surface area of the cylinder. Round your answer to the nearest tenth.

 5.  6. 

 7. A deep dish pizza has a radius of 6 inches and a height of 1 inch. Find the surface area of the pizza. Round your answer to the nearest tenth.

The Icing on the Cake

Answer the following questions. As you calculate the surface area that icing covers, keep in mind that the bottom of the cake does not get any icing.

1. A cylindrical cake is made in a pan that has a diameter of 9 inches and
a height of inches.

a. What is the total surface area of the cake?

b. The cake is cut into 10 equal-sized wedges. What is the total surface area of the cake now?

 c. After the cake is cut, what percent of the cake’s surface is covered with icing?

 d. Cake does not stay as moist after it has been cut into pieces. Use
surface area to explain this.

2. José has decided to make a heart-shaped cake using a square pan that is 9 inches by 9 inches and a circular pan with a diameter of 9 inches. Both pans are  inches tall. The diagram below shows the top view of the cake.

 a. José knows from experience that one 8-ounce container of icing will cover a cake made from his square pan exactly the way he likes it.
If he covers his heart-shaped cake the same way, how many ounces
of icing will he use?

 b. How many 8-ounce containers of icing will he have to buy? How much icing will be left over?