Hollow Volume
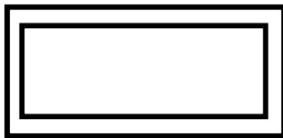
1. A hollow cylinder has a height of 10 inches, an outer diameter of 5 inches, and a thickness of 1 inch. Find the volume to the hollow cylinder to the nearest cubic inch.
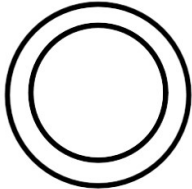
2. A hollow rectangular prism has a length of 12 cm, a width of 4 cm, a height of 16 cm, and a thickness of 0.5 cm. Find the volume of the hollow rectangular prism to the nearest cubic centimeter.


3. A hollow sphere has an outer diameter of 10 feet, and a thickness of 1.5 feet. Find the volume of the hollow sphere to the nearest tenth of a cubic foot.

4. A hollow rectangular prism has a length of 8 meters, a width of 6 meters, a height of 4 meters, and a thickness of 1 meter.. Find the volume of the hollow rectangular prism to the nearest cubic meter.

5. A box tube is to be constructed out of 1 cm thick metal that has a width of 10 cm, a height of 6 cm, and a depth of 15 cm. Which of the following represents the volume of the metal used?

(1) 420 cm^3 (3) 640 cm^3

(2) 540 cm^3 (4) 760 cm^3

15 cm

1 cm

6 cm

10 cm
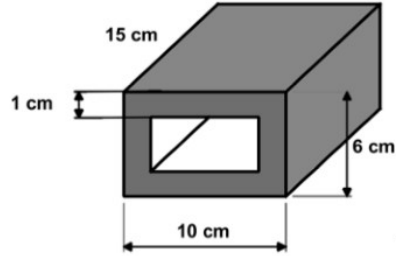
6. The paper towel roll shown below has a diameter of 8 inches and the paper has a thickness of 3 inches. If the height of the paper towel roll is 12 inches, what is the volume of the paper towels? Round your answer to the nearest tenth of a cubic inch.

7. A hollow metal pipe is in the shape of a rectangular prism that has a height of 12 cm. The length is 5 cm and the width is 2 cm. If the thickness is 0.5 cm all the way around, what is the volume of the metal?