Handout 2: Scratching The Surface Area
Answers

10 yd

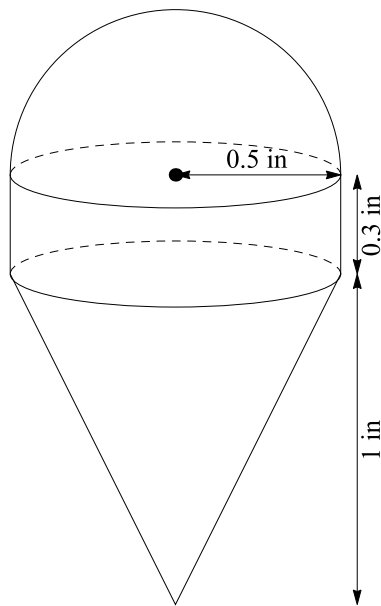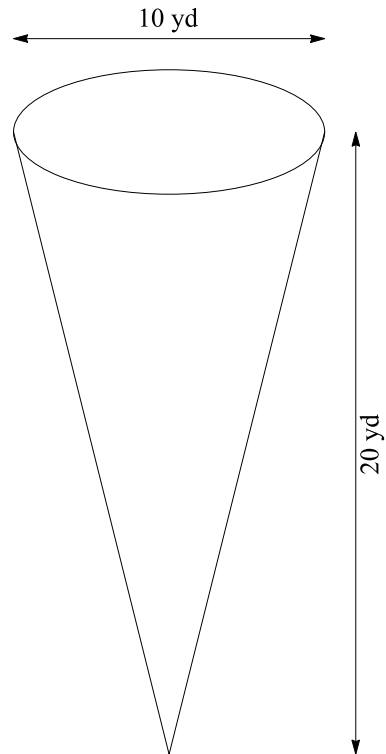0.5 in

0.3 in

1 in

20 yd

Figure 1

Figure 2

1. Find the surface area of the solid in Figure 1.

   $SA \approx 4.1 \text{ in}^2$.

2. Find the surface area of the solid in Figure 2.

   $SA \approx 402.4 \text{ yd}^2$.

3. Find the lateral and surface areas of a prism whose base is a right triangle with legs of length 8 cm and 10 cm, and height is 18 cm

   $L \approx 554.4 \text{ cm}^2$, $SA \approx 634.4 \text{ cm}^2$.

4. Find the lateral and surface areas of a cylinder with a diameter of 12 mm and a diagonal of 24 mm.

   $L \approx 783.6 \text{ mm}^2$, $SA \approx 1009.8 \text{ mm}^2$.

5. Find the lateral and surface areas of a square pyramid with a side of 15 in and a slant height of 21 in.

   $L = 630 \text{ in}^2$, $SA = 855 \text{ in}^2$.

6. Find the lateral and surface areas of a cone with a height of 8 ft and a radius of 5.5 ft.

   $L \approx 167.6 \text{ ft}^2$, $SA \approx 262.6 \text{ ft}^2$.

7. Find the surface area of a sphere with a diameter of 7 mm.

   $SA \approx 153.9 \text{ m}^2$.

8. Your little brother wants to make a mask out of a cardboard cereal box. The box has measurements of 15 inches, 5 inches, and 3 inches. If you estimate your little brother's head as a sphere with circumference 18 inches, how many masks can the cereal box make?

   2.

9. If you get paid \$100 to paint the outside of a 30 ft × 40 ft × 25 ft house, how much money per cubic foot of paint are you earning?

   Less than 2 cents per cubic foot.

10. Your dad has a silver paperweight in the shape of a small square pyramid which you decide to wrap with foil. How much foil will you need if the base of the square pyramid is 2 inches long and the height of the pyramid is 2 inches?

    12.9 square inches of foil.