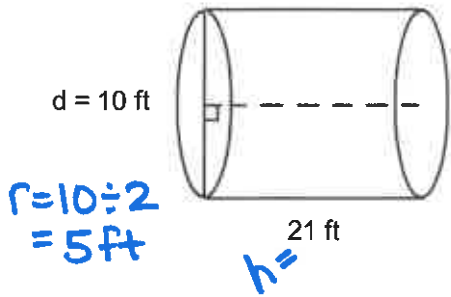
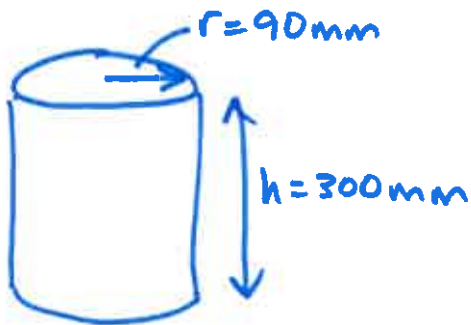


Find the surface area of the following cylinder. Round your answer to the nearest hundredth.



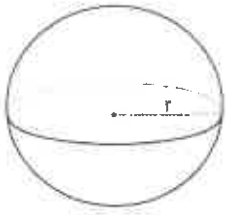
$$\begin{aligned}
 SA &= 2\pi r^2 + 2\pi r h \\
 &= 2 \times \pi \times 5^2 + 2 \times \pi \times 5 \times 21 \\
 &= 157.0796 + 659.7344 \\
 &= \boxed{816.81 \text{ ft}^2}
 \end{aligned}$$

Find the surface area of a cylinder that has a radius of 90mm and a height of 300mm. Round your answer to the nearest hundredth.



$$\begin{aligned}
 SA &= 2 \times \pi \times 90^2 + 2 \times \pi \times 90 \times 300 \\
 &= 50893.8009 + 169646.0033 \\
 &= \boxed{220539.80 \text{ mm}^2}
 \end{aligned}$$

Surface Area of a Sphere



The formula for the surface area of a sphere is:

$$SA = 4\pi r^2$$

OR

$$SA = \pi d^2$$

Find the surface area of a sphere with a radius of 11.5 cm. Round your answer to the nearest hundredth.

$$SA = 4 \times \pi \times 11.5^2$$
$$= 1661.90 \text{ cm}^2$$

What is the surface area of a sphere with a diameter of 19 m? Round your answer to the nearest hundredth.

$$SA = \pi \times 19^2$$
$$= 1134.11 \text{ m}^2$$

A ball has a surface area of 24000 m^2 . What is its diameter? Round your answer to the nearest tenth.

$$SA = \pi d^2$$
$$\frac{24000}{\pi} = \frac{\pi \times d^2}{\pi}$$
$$\sqrt{7639.437} = \sqrt{d^2}$$
$$\sqrt{7639.437} = d$$
$$87.4 = d$$

87.4 m