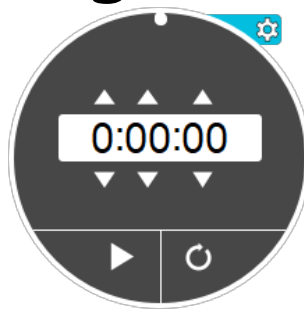
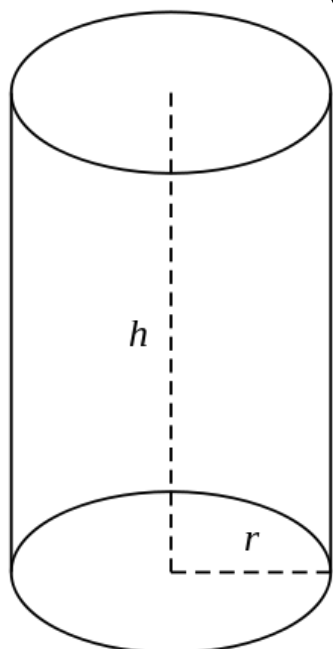


30 minutes to finish Surface Area Assignment



Surface Area of a Composite Object With **Cylinders**

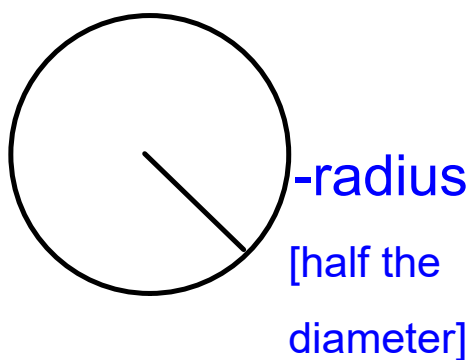


h = height

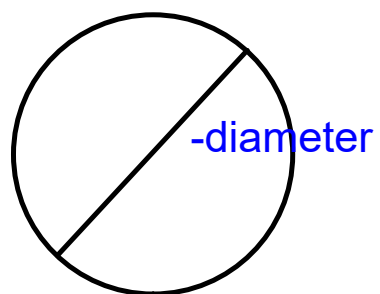
r = radius



Review



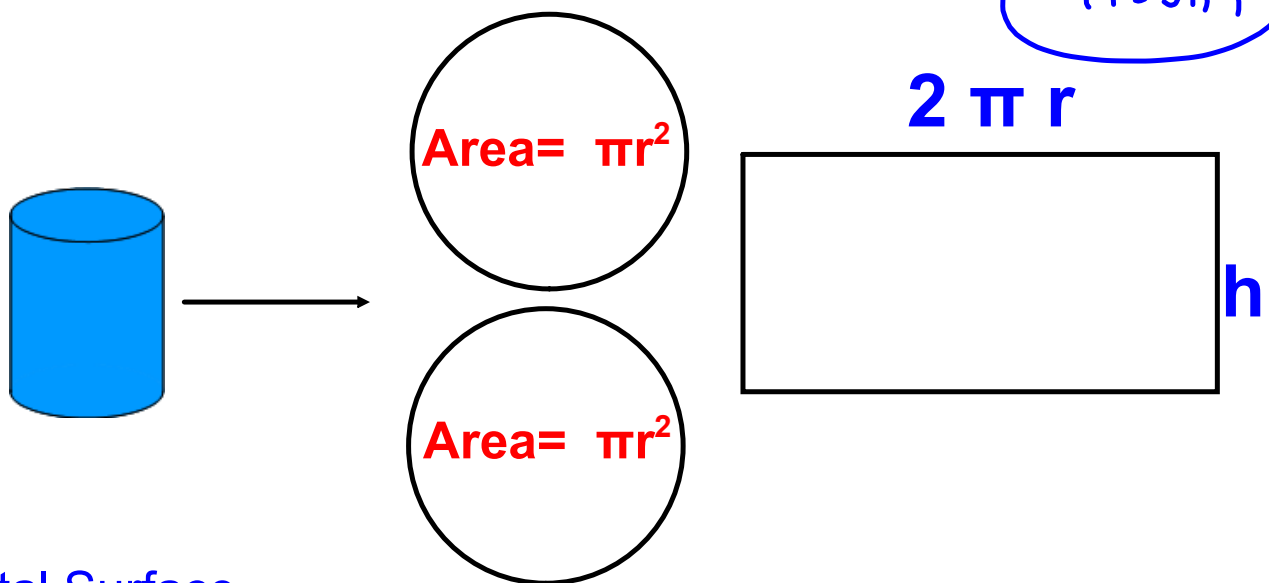
$$r = 5\text{cm}$$



$$d = 10\text{cm}$$

Parts of a Cylinder

$$\pi = 3.14$$

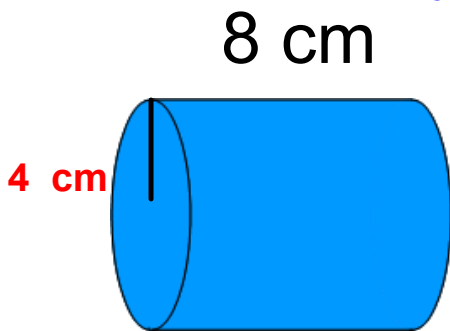


Total Surface

Area of Cylinder = area of 2 circles + area of curved surface

$$\text{SA of cylinder} = 2\pi r^2 + 2\pi r h$$

Surface Area of Cylinder = area of two circles + area of curved surface



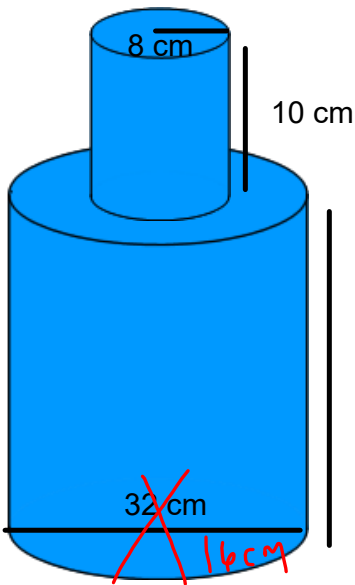
$$SA = 2\pi r^2 + 2\pi r h$$

$$2(3.14)(4)^2 + 2(3.14)(4)(8)$$

$$2(3.14)(16) + 200.96$$

$$100.48 + 200.96$$

$$301.44 \text{ cm}^2$$



$$2\pi r^2 + 2\pi r h$$

Top Cylinder

$$\begin{aligned}
 SA &= 2\pi r^2 + 2\pi r h \\
 &= 2(3.14)(8)^2 + 2(3.14)(8)(10) \\
 &= 2(3.14)(64) + 502.40 \\
 &= 401.92 + 502.40 \\
 &= 904.32 \text{ cm}^2
 \end{aligned}$$

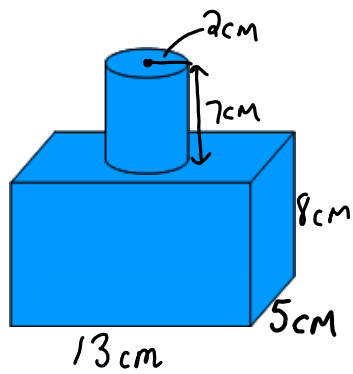
Area of 2 circles →

Bottom Cylinder

$$\begin{aligned}
 SA &= 2\pi r^2 + 2\pi r h \\
 &= 2(3.14)(16)^2 + 2(3.14)(16)(20) \\
 &= 1607.68 + 2009.60 \\
 &= 3617.28 \text{ cm}^2
 \end{aligned}$$

$$904.32 + 3617.28 = 4521.60$$

$$4521.60 - 401.92 = 4119.68 \text{ cm}^2$$



Rectangular Prism

Cylinder $2\pi r^2 + 2\pi r h$