

Surface Area #1: Rectangular Prisms
Triangular Prisms
Cylinders

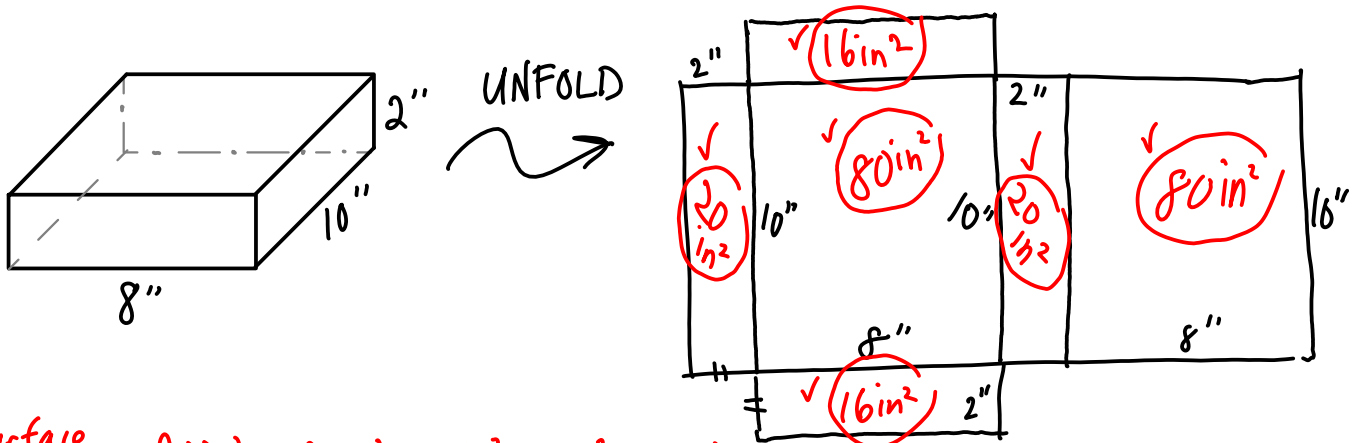
Name: _____

Date: _____ Period: _____

Mr. Ferraro/Mr. Wong

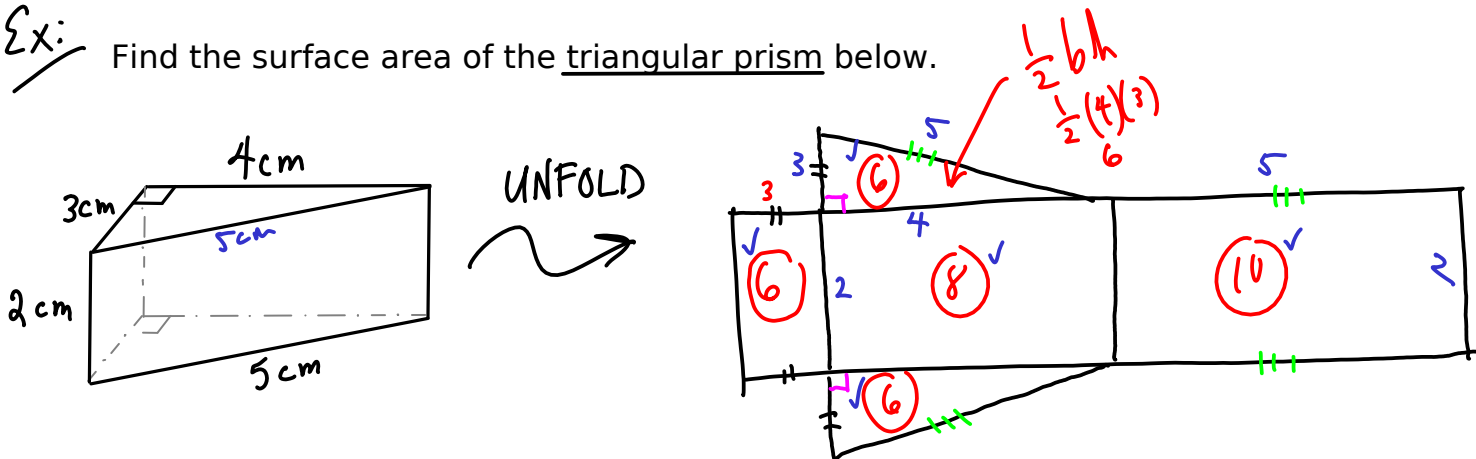
* Prisms are 3D shapes with bases (|| surfaces) and lateral faces connecting them. Surface area is sum of the area of all faces (surfaces).

Ex: Find the surface area of the rectangular prism below.



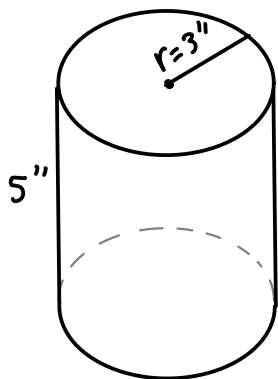
$$\begin{aligned} \text{Surface Area} &= 20 \text{ in}^2 + 20 \text{ in}^2 + 16 \text{ in}^2 + 16 \text{ in}^2 + 80 \text{ in}^2 + 80 \text{ in}^2 \\ &= \boxed{232 \text{ in}^2} \end{aligned}$$

Ex: Find the surface area of the triangular prism below.

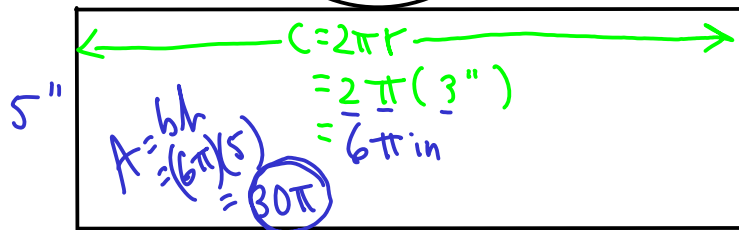
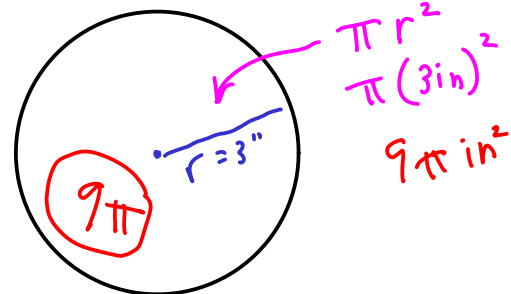


$$\begin{aligned} \text{Surf. Area} &= 6 \text{ cm}^2 + 6 \text{ cm}^2 + 6 \text{ cm}^2 + 8 \text{ cm}^2 + 10 \text{ cm}^2 \\ &= \boxed{36 \text{ cm}^2} \end{aligned}$$

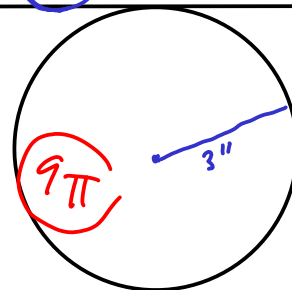
Ex: Find the surface area of the cylinder below.



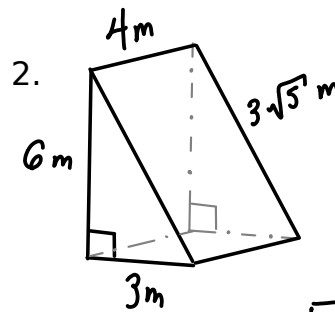
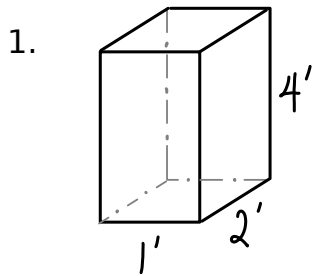
UNROLL
~~UNFOLD~~



$$\begin{aligned} \text{Surface Area} &= 9\pi \text{ in}^2 + 9\pi \text{ in}^2 + 30\pi \text{ in}^2 \\ &= \boxed{48\pi \text{ in}^2} \end{aligned}$$



EXERCISES: For each figure, determine its surface area.



$$\begin{aligned} \text{Surf Area} &= 9\text{m}^2 + 9\text{m}^2 + 12\text{m}^2 + 24\text{m}^2 + 12\sqrt{5}\text{m}^2 \\ &= 54\text{m}^2 + 12\sqrt{5}\text{m}^2 \\ &= \boxed{(54 + 12\sqrt{5})\text{m}^2} \end{aligned}$$

