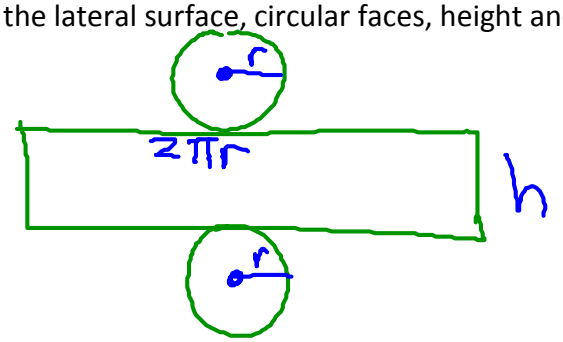
Surface Area of Cylinders

1. Draw a **3-D sketch** of a cylinder. Label the height and radius of your cylinder.

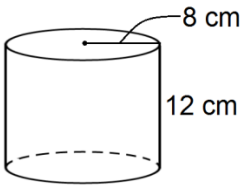
2. Draw the **net** of a cylinder.
   Label the lateral surface, circular faces, height and radius.



3. Write the **surface area formula** for a cylinder.

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

4. Find the surface area of each cylinder.



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

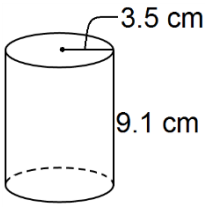
$= 2\pi(8)^2 + 2\pi(8)(12)$

$= 2\pi(64) + 2\pi(96)$

$= 2 \times \pi \times 64 + 2 \times \pi \times 96$

$= 402.1 + 603.2$

$= 1005.3\ cm^2$



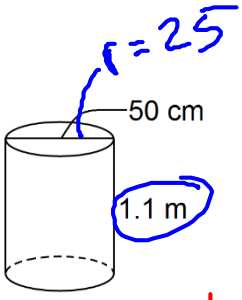
$SA = 2\pi r^2 + 2\pi rh$

$= 2\pi(3.5)^2 + 2\pi(3.5)(9.1)$

$= 2\pi(12.25) + 2\pi(31.85)$

$= 76.97 + 200.12$

$= 277.09\ cm^2$



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

$= 2\pi(25)^2 + 2\pi(25)(110)$

$= 2\pi(625) + 2\pi(2750)$

$= 3926.99 + 17278.76$

$= 21205.75\ cm^2$