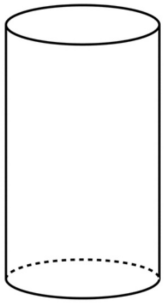
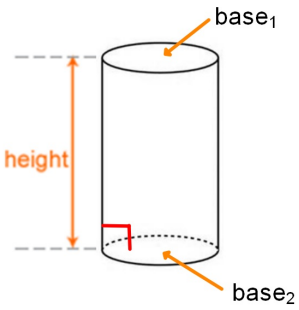
Cylinders:

Two congruent parallel bases that are CIRCLES

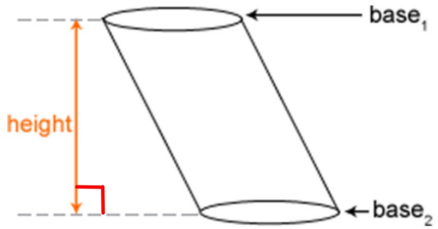


Height of a cylinder is the perpendicular distance between the bases.

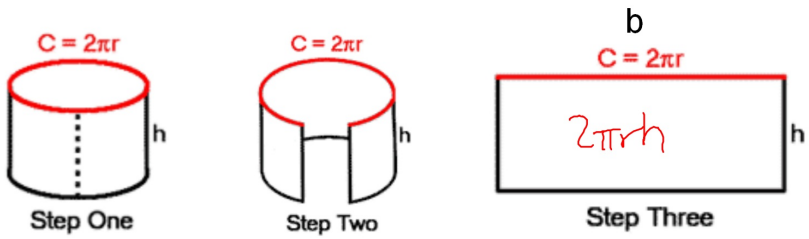
Right Cylinder:



Oblique Cylinder



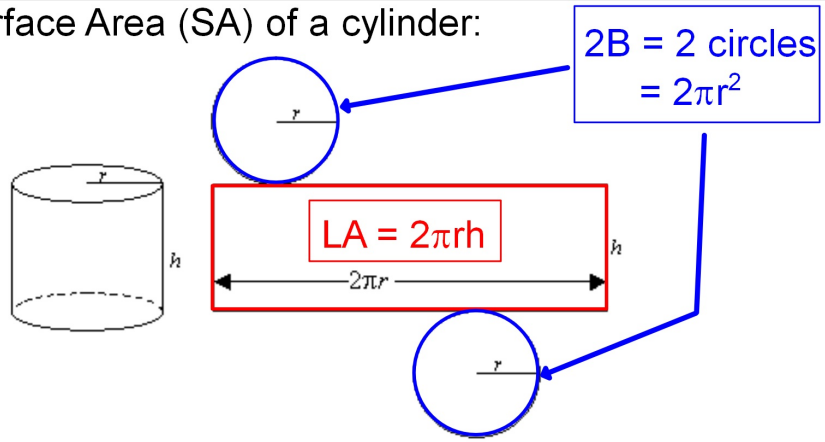
Lateral Surface Area of a Cylinder:



LA = ph

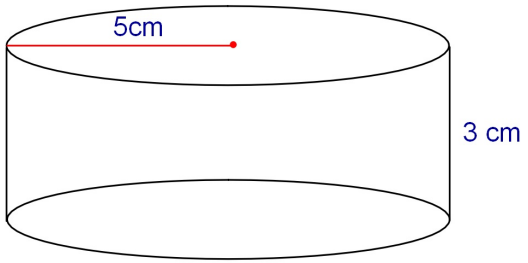
LA = 2πrh

Surface Area (SA) of a cylinder:



SA = LA + 2B → SA = 2πrh + 2πr²

Find the SA of this cylinder. Leave answer in terms of π.



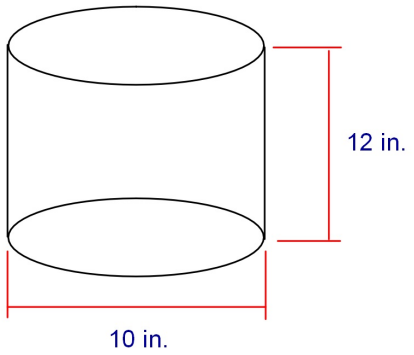
$SA = LA + 2B$

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

$= 2\pi(5)(3) + 2\pi(5)^2$

$= 30\pi + 50\pi = 80\pi \text{ cm}^2$

Find the SA of this cylinder to the nearest tenth.



$LA + 2B$

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

$2\pi(5)(12) + 2\pi(5)^2$

$120\pi + 50\pi$

170π

533.8 in^2

Given the radius of a cylinder is 6 in and the SA = 252π in^2

Find the height of the cylinder.

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

$252\pi = 2\pi(6)h + 2\pi(6)^2$

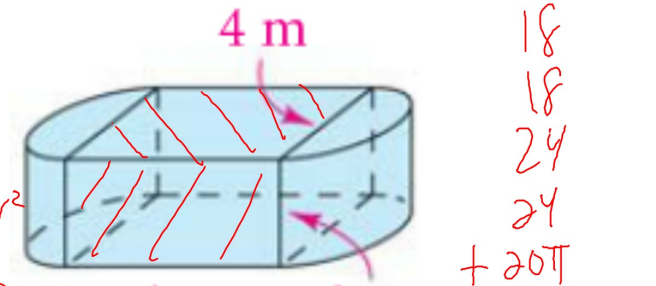
$252\pi = 12\pi h + 72\pi$

$-72\pi \quad -72\pi$

$\frac{180\pi}{12\pi} = \frac{12\pi h}{12\pi}$

$h = 15 \text{ in}$

Find the SA of this solid.



CYLINDER

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

$2\pi(3)3 + 2\pi(3)^2$

$12\pi + 8\pi$

20π

18
18
24
24
$+ 20\pi$

$84 + 20\pi \ m^2$