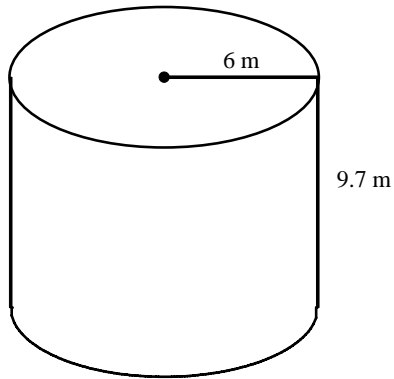


NAME: _____

P.I. A.G.2: Use formulas to calculate surface area of cylinders

1. Find the surface area of the cylinder to the nearest square unit. (Use $\pi = 3.14$.)

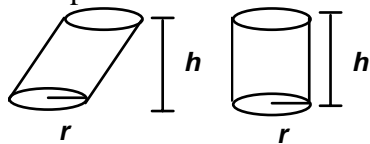


- [A] 58 m^2 [B] 592 m^2 [C] 296 m^2 [D] 94 m^2

2. Determine which of these cylinders has the largest surface area.

- [A] a cylinder with a height of 8 cm and a base with a radius of 3 cm
[B] a cylinder with a height of 4 cm and a base with a radius of 8 cm
[C] a cylinder with a height of 8 cm and a base with a radius of 4 cm
[D] a cylinder with a height of 6 cm and a base with a radius of 3 cm

3. Compare the surface areas of the two cylinders shown. Justify your answer.



4. The surface area of a cylinder is 28.64 cm^2 . The radius of the base is doubled. The surface area of the new cylinder is

- [A] doubled [B] tripled [C] quadrupled [D] the same
[E] Not enough information is given to determine the amount of change in the surface area.

5. Make a table showing the surface area and height of five different cylinders with radii 2, 3, 4, 5, and 6, if the volume of each cylinder is 144π . Which cylinder has the least surface area?

[1] B _____

[2] B _____

[3] They are the same, because the lateral area of each is $2\pi rh$ and the bases have the same area as well.

[4] E _____

r	2	3	4	5	6
h	36	16	9	5.76	4
SA	152π	114π	104π	107.6π	120π

[5] The cylinder that has the least surface area is the one with radius 4 and height 9.
