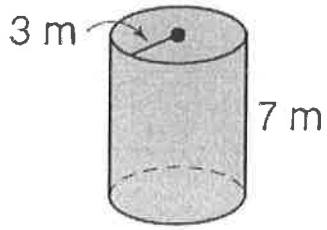
Surface Area of Cylinders

Key

Find the surface area of each cylinder to the nearest tenth. Use 3.14 for π.

1.



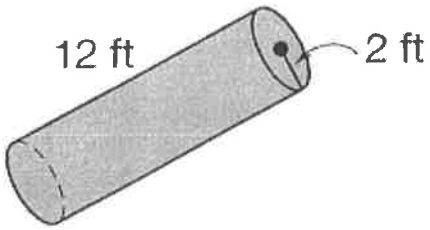
F $SA = 2\pi r^2 + \pi d H$

S $= 2 \cdot 3.14 \cdot 3^2 + 3.14 \cdot 6 \cdot 7$

$56.52 + 131.88$

A $188.4\ m^2$

2.



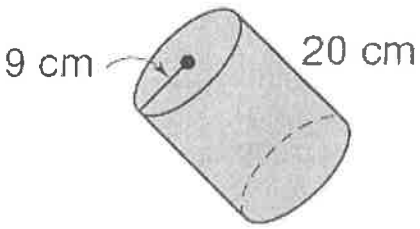
$SA = 2\pi r^2 + \pi d H$

$2 \cdot 3.14 \cdot 2^2 + 3.14 \cdot 4 \cdot 12$

$25.12 + 150.72$

$175.84\ ft^2$

3.



$= 2\pi r^2 + \pi d H$

$2 \cdot 3.14 \cdot 9^2 + 3.14 \cdot 18 \cdot 20$

$508.68 + 1130.4$

$1639.08\ cm^2$

4. Diameter = 12 in; height = 10 in	$2\pi r^2 + \pi d H$ $2 \cdot 3.14 \cdot 6^2 + 3.14 \cdot 12 \cdot 10$ $226.08 + 376.8$ 602.88 in^2
5. Radius = 10 cm; height = 30 cm	$2\pi r^2 + \pi d H$ $2 \cdot 3.14 \cdot 10^2 + 3.14 \cdot 10 \cdot 30$ $628 + 942$ 1570 cm^2
6. Jule wants to paint his model rocket. The rocket is 28 inches tall and has a radius of 2 inches. He has enough paint to cover an area of 300 in^2. Does he have enough paint to cover his rocket? *Hint: The top of his rocket tube is an opening for the nosecone, and the bottom is an opening for the motor, so you only have to find the area of the lateral surface.* ↳ ▭ no circles	$A = 300 \text{ in}^2$  ▭ $300 \geq \pi d h$ $300 \geq 3.14 \cdot 4 \cdot 28$ $300 \geq 351.68$ not enough.