SURFACE AREA - CYLINDER

ANSWERS

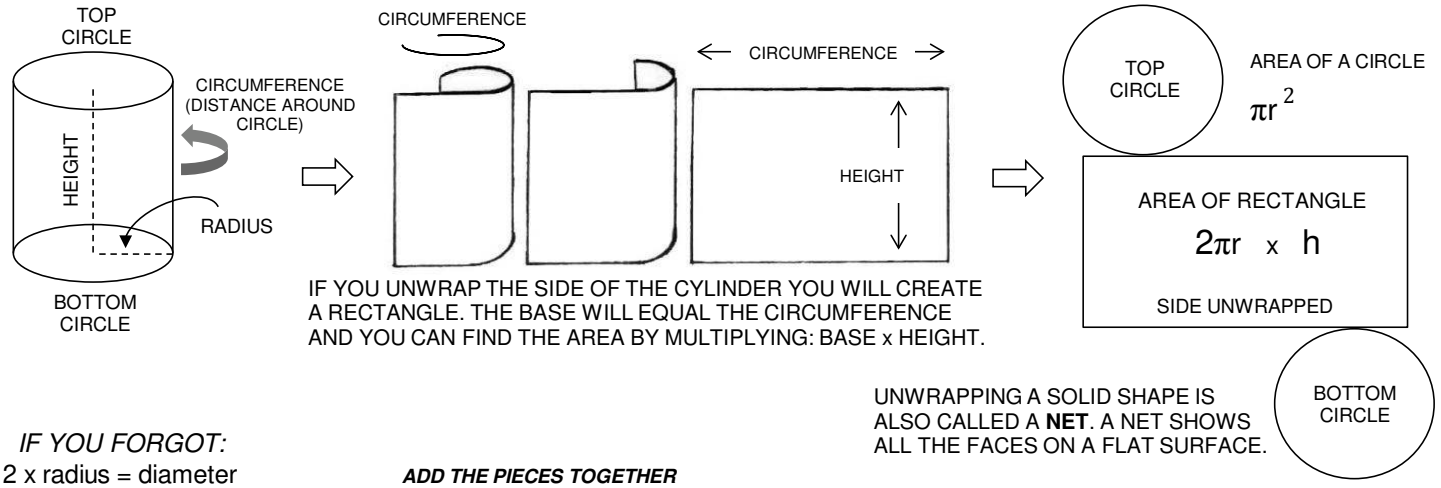
BEFORE YOU START YOU SHOULD KNOW HOW TO FIND THE AREA AND CIRCUMFERENCE (PERIMETER) OF A CIRCLE.

AREA OF A CIRCLE = πr^2

CIRCUMFERENCE OF A CIRCLE = $2\pi r$

{ WHERE " π " IS APPROXIMATELY 3.14 AND " r " IS THE RADIUS OF THE CIRCLE OR HALF THE DIAMETER.

THE ***SURFACE AREA*** OF A CYLINDER IS THE TOTAL AREA OF ITS SURFACE. A CYLINDER HAS TWO CIRCLES AND A "WRAPPER" GOING AROUND THE OUTSIDE. BELOW IS A MORE DETAILED DESCRIPTION.



IF YOU UNWRAP THE SIDE OF THE CYLINDER YOU WILL CREATE A RECTANGLE. THE BASE WILL EQUAL THE CIRCUMFERENCE AND YOU CAN FIND THE AREA BY MULTIPLYING: BASE x HEIGHT.

UNWRAPPING A SOLID SHAPE IS ALSO CALLED A **NET**. A NET SHOWS ALL THE FACES ON A FLAT SURFACE.

IF YOU FORGOT:
2 x radius = diameter

ADD THE PIECES TOGETHER

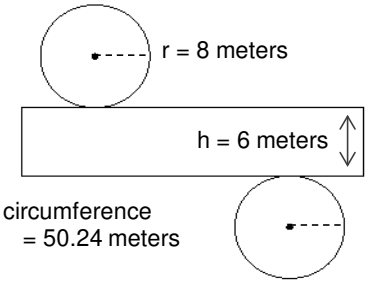
SURFACE AREA OF CYLINDER = $\pi r^2 + \pi r^2 + 2\pi r \times h$

(πr^2: TOP CIRCLE + BOTTOM CIRCLE; $2\pi r \times h$: SIDE OF CYLINDER)

Now your turn. Find the surface area of each solid shape or net.
Use 3.14 for π, and round all answers to the nearest whole number.

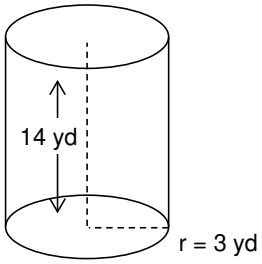
LABEL YOUR ANSWERS.

1.



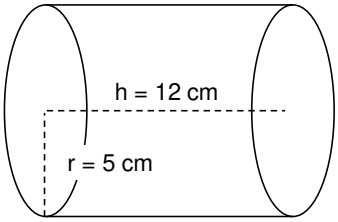
703 m^2

2.



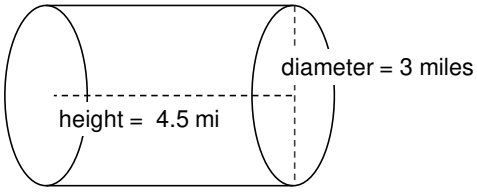
320 yd^2

3.



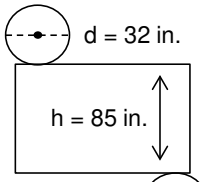
534 cm^2

4.



57 $miles^2$

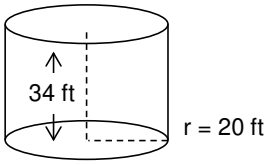
5.



KEY INFORMATION:
Diameter = 32 in.
Height = 85 in.

10,148 $inches^2$

6.



6,782 ft^2

7. Which statement is true?

- ○ A cylinder is made up of 3 identical circles.
- ○ A cylinder is made up of 3 rectangles.
- ● A cylinder is made up of 2 identical circles and 1 rectangle.