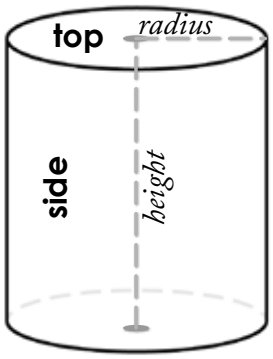
Name: _____

Surface Area of a Cylinder



$\pi = 3.14$

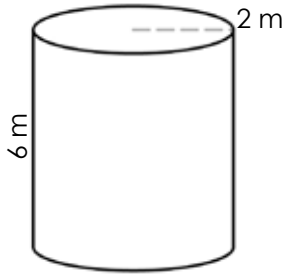
area of **top** = πr^2
area of **bottom** = πr^2
area of **top** + **bottom** = $2\pi r^2$

area of **side** = *circumference* x *height*
circumference = $2\pi r$
area of **side** = $2\pi rh$

Surface Area = $2\pi r^2 + 2\pi rh$

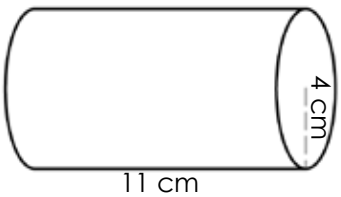
Calculate the *Surface Area* (*S.A.*) for each cylinder by using the formula $S.A. = 2\pi r^2 + 2\pi rh$. Use 3.14 for π.

a.



a. _____

b.



b. _____

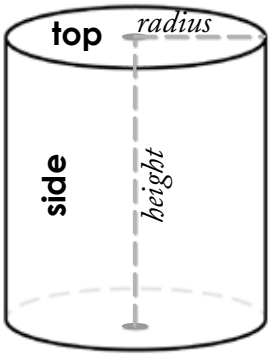
c. *radius* = 12 mm

height = 3 mm

c. _____

ANSWER KEY

Surface Area of a Cylinder



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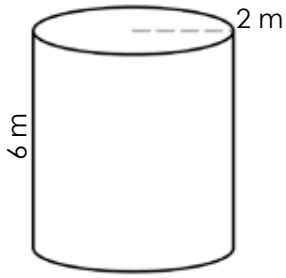
$$\textit{Surface Area} = 2\pi r^2 + 2\pi rh$$

Calculate the *Surface Area* (*S.A.*) for each cylinder by using the formula $S.A. = 2\pi r^2 + 2\pi rh$. Use 3.14 for π.

a.



$S.A. = 2\pi r^2 + 2\pi rh$

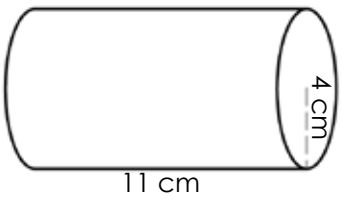
$S.A. = 2(3.14 \times 2^2) + 2(3.14 \times 2 \times 6)$

$S.A. = 25.12 + 75.36$

$S.A. = 100.46 \text{ m}^2$

a. $S.A. = 100.48 \text{ m}^2$

b.



$S.A. = 2\pi r^2 + 2\pi rh$

$S.A. = 2(3.14 \times 4^2) + 2(3.14 \times 4 \times 11)$

$S.A. = 100.48 + 276.32$

$S.A. = 376.8 \text{ cm}^2$

b. $S.A. = 376.8 \text{ cm}^2$

c. *radius* = 12 mm

height = 3 mm

$S.A. = 2\pi r^2 + 2\pi rh$

$S.A. = 2(3.14 \times 12^2) + 2(3.14 \times 12 \times 3)$

$S.A. = 904.32 + 226.08$

$S.A. = 1{,}130.4 \text{ mm}^2$

c. $S.A. = 1{,}130.4 \text{ mm}^2$