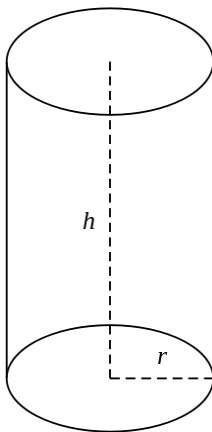


November 18, 2015

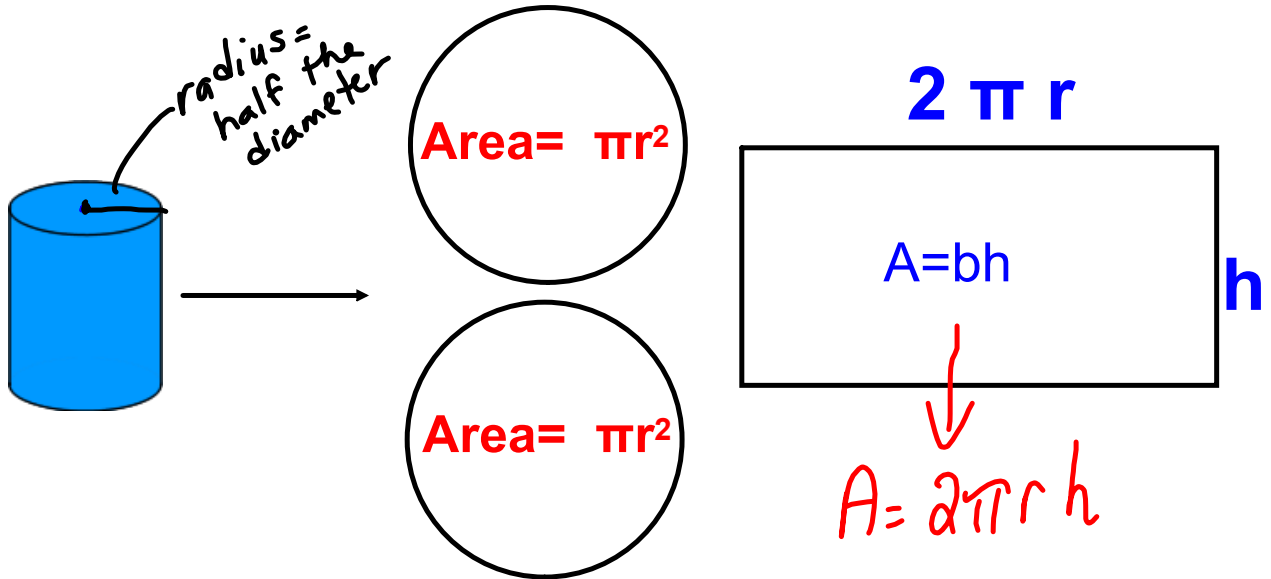
# Surface Area of a Composite Object

## With Cylinders



# Parts of a Cylinder

$\pi = 3.14$



Total Surface

Area of Cylinder =

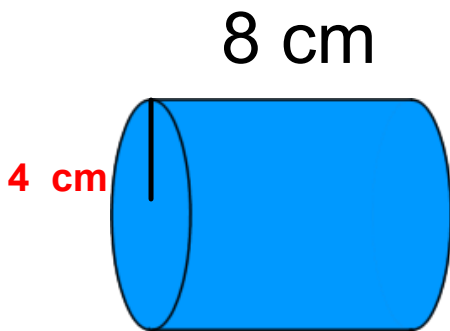
area of 2 circles + area of curved surface

$SA_{cylinder} = 2\pi r^2 + 2\pi r h$

# Surface Area of Cylinder

$$2 \pi r^2 + 2 \pi r h$$

area of two circles + area of curved surface



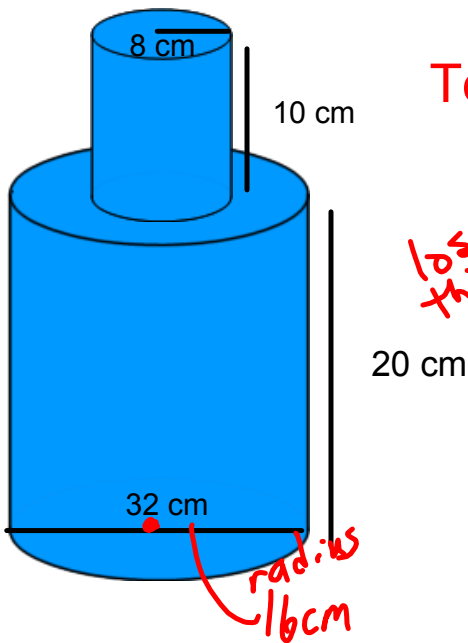
$$SA = 2 \pi r^2 + 2 \pi r h$$

$$= 2(3.14)(4)^2 + 2(3.14)(4)(8)$$

$$= 100.48 + 200.96$$

$$= 301.44 \text{ cm}^2$$

area of two circles



$SA = 2\pi r^2 + 2\pi r h$   
 Top Cylinder ← *area of two circles*

$SA = 2\pi r^2 + 2\pi r h$   
 $= 2(3.14)(8)^2 + 2(3.14)(8)(10)$   
 $= 401.92 + 502.4$   
 $= 904.32 \text{ cm}^2$

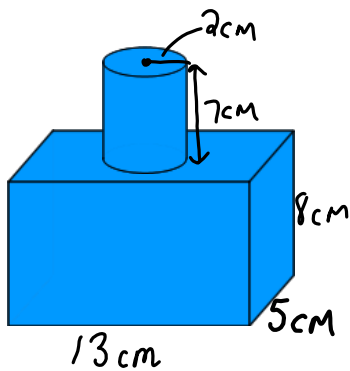
*lose this* →

**Bottom Cylinder**

$SA = 2\pi r^2 + 2\pi r h$   
 $= 2(3.14)(16)^2 + 2(3.14)(16)(20)$   
 $= 1607.68 + 2009.6$   
 $= 3617.28 \text{ cm}^2$

$904.32 + 3617.28 = 4521.6$

$- 401.92$   
 $4119.68 \text{ cm}^2$



**Cylinder**  $SA = 2\pi r^2 + 2\pi rh$   
 $= 2(3.14)(2)^2 + 2(3.14)(2)(7)$   
 $= 25.12 + 87.92$   
 $= 113.04$

*lose* →

**Rectangular Prism**

<p>F/B</p> <div style="border: 1px solid red; padding: 2px; display: inline-block;">x2</div> 8	<p>T/B</p> <div style="border: 1px solid red; padding: 2px; display: inline-block;">x2</div> 5	<p>side</p> <div style="border: 1px solid red; padding: 2px; display: inline-block;">x2</div> 8
<p>13</p> $A = bh$ $= 13 \times 8$ $= 104$ $\times 2$ <hr style="width: 50%; margin: 0 auto;"/> <p>208</p>	<p>13</p> $A = bh$ $= 13 \times 5$ $= 65$ $\times 2$ <hr style="width: 50%; margin: 0 auto;"/> <p>130</p>	<p>5</p> $A = bh$ $= 5 \times 8$ $= 40$ $\times 2$ <hr style="width: 50%; margin: 0 auto;"/> <p>80</p>
<p>+                      +                      +                      ∴ 418</p>		

$TSA = 418 + 113.04$

$= 531.04 \text{ cm}^2$

$- 25.12$

$\underline{\underline{505.92 \text{ cm}^2}}$

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

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# 3 a, b, c

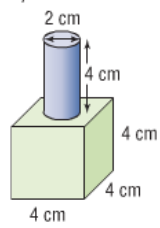
a)  $121 \text{ cm}^2$

b)  $117 \text{ cm}^2$

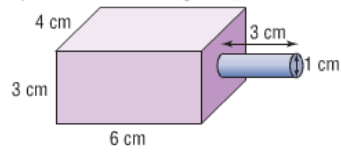
c)  $283 \text{ cm}^2$

composite object. Give the answers to the nearest whole number.

a) cylinder on a cube



b) cylinder on a rectangular prism



c) cylinder on a cylinder

