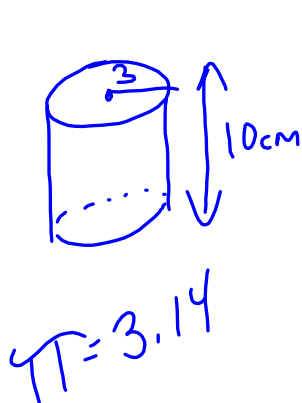


$$SA = 2\pi r^2 + 2\pi rh$$

November 21, 2018

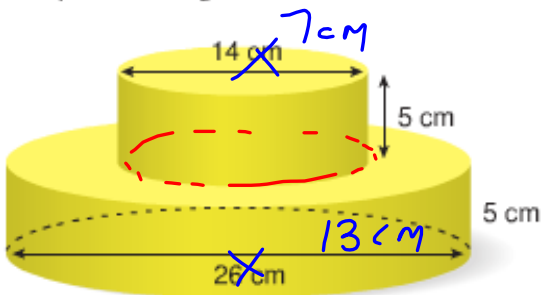
The diameter of a cylinder is ~~6~~³ cm and the height is 10 cm. Find the surface area of the cylinder...include a sketch



$$r = 3$$

$$\begin{aligned}
 SA &= 2\pi r^2 + 2\pi rh \\
 &= 2(3.14)(3)^2 + 2(3.14)(3)(10) \\
 &= 56.52 + 188.40 \\
 &= 244.92 \text{ cm}^2
 \end{aligned}$$

Two round cakes have diameters of 14 cm and 26 cm, and are 5 cm tall. They are arranged as shown. The cakes are covered in frosting. What is the area of frosting?



- * No frosting between layers
- * No frosting on bottom of cake.

Small Cylinder

$$\begin{aligned}
 SA &= 2\pi r^2 + 2\pi rh \\
 &= 2(3.14)(7)^2 + 2(3.14)(7)(5) \\
 &= 307.72 + 219.80 \\
 &= 527.52
 \end{aligned}$$

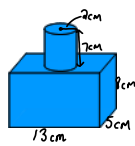
two circles

Large Cylinder

$$\begin{aligned}
 SA &= 2\pi r^2 + 2\pi rh \\
 &= 2(3.14)(13)^2 + 2(3.14)(13)(5) \\
 &= 1061.32 + 408.20 \\
 &= 1469.52
 \end{aligned}$$

lose 1 circle so by 2

$$\begin{aligned}
 &527.52 + 1469.52 - 307.72 = 530.76 \\
 &\boxed{1158.46}
 \end{aligned}$$



Cylinder $SA = 2\pi r^2 + 2\pi r h$
 $= 2(3.14)(2)^2 + 2(3.14)(2)(7)$
 $= 85.12 + 87.92$
 $= 113.04$

Area of 2 circles

Rectangular Prism

$\frac{F/B}{x^2}$	$\frac{T/B}{x^2}$	$\frac{A}{x^2}$
$\frac{13}{x^2}$	$\frac{13}{x^2}$	$\frac{6^2}{x^2}$
$A = bh$	$A = bh$	$A = bh$
$= 13 \times 8$	$= 13 \times 5$	$= 36$
$= 104$	$= 65$	$= 40$
$\frac{104}{20}$	$\frac{65}{20}$	$\frac{40}{20}$
$= 5.2$	$= 3.25$	$= 2$

$5.2 + 3.25 + 2 = 10.45$

$TSA = 418 + 113.04$
 $= 531.04 \text{ cm}^2$
 $- 25.12$
 $\boxed{505.92 \text{ cm}^2}$

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 #3 a, b, c

** Use the radius*

- a) 121 cm^2
- b) 117 cm^2
- c) 283 cm^2

#4 a, b $\leftarrow 62.1 \text{ cm}^2$
 56.1 cm^2

#9 Hints...the base of the cake will not be frosted...it sits on the plate...DO NOT put frosting between layers

$\boxed{2081.3 \text{ cm}^2}$

Checking for understanding question to be passed in.

