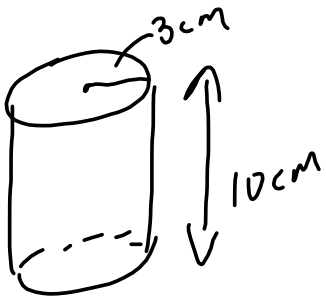
$SA = 2\pi r^2 + 2\pi rh$

November 25, 2019

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



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

$= 2(3.14)(3)^2 + 2(3.14)(3)(10)$

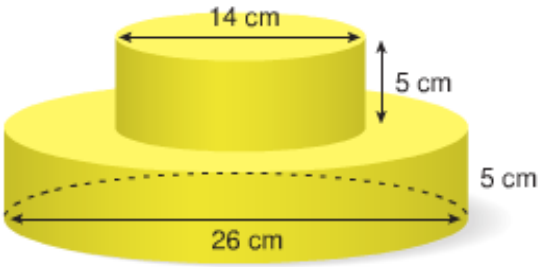
$= 2(3.14)(9) + 188.4$

$56.52 + 188.4$

$244.92\ cm^2$

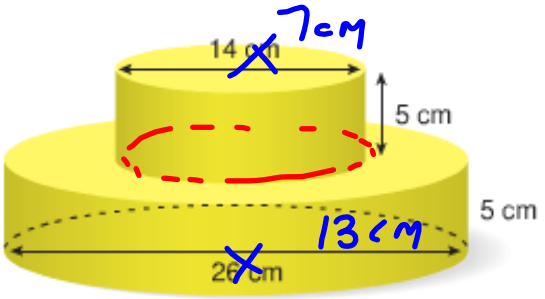
Area of 2 circles

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.

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?

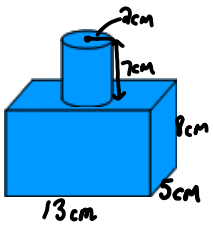


* No frosting between layers
* No frosting on bottom of cake.

Small Cylinder
$SA = 2\pi r^2 + 2\pi rh$
$= 2(3.14)(7)^2 + 2(3.14)(7)(5)$
$= 307.72 + 219.80$
$= 527.52$
two circles

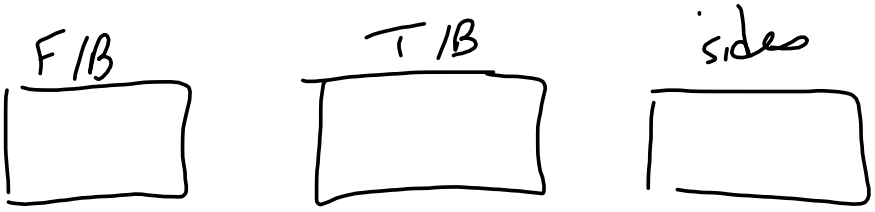
Large Cylinder
$SA = 2\pi r^2 + 2\pi rh$
$= 2(3.14)(13)^2 + 2(3.14)(13)(5)$
$= 1061.32 + 408.2$
$= 1469.52$
Lose 1 so circle is by 2

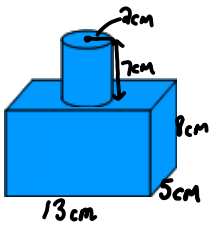
Total SA: $527.52 + 1469.52 = 1997.04$
$- 307.72$ ← lose two from bottom
$- 530.66$ ← lose one
$1158.66\ cm^2$



Cylinder

Rectangular Prism





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

$= 2(3.14)(2)^2 + 2(3.14)(2)(7)$

Area of 2 circles: $= 25.12 + 87.92$

$= 113.04$

Rectangular Prism

F/B x2: 8, 13, A: bh, $= 13 \times 8$, $= 104$, 208

T/B x2: 5, 13, A: bh, $= 13 \times 5$, $= 65$, 130

Sides x2: 8, 5, A: bh, $= 5 \times 8$, $= 40$, 80

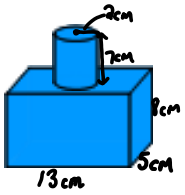
$+ \quad + \quad + \quad .418$

TSA: $418 + 113.04$

$: 531.04 \text{ cm}^2$

$- 25.12$

505.92 cm^2



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

$= 2(3.14)(2)^2 + 2(3.14)(2)(7)$

Area of 2 circles $= 25.12 + 87.92$

$= 113.04$

Rectangular Prism

F/B x2 8 — $A = bh = 13 \times 8 = 104$

T/B x2 5 — $A = bh = 13 \times 5 = 65$

Sides x2 8 — $A = bh = 8 \times 10 = 80$

$104 + 65 + 80 = 418$

TSA: $418 + 113.04$

$= 531.04\ cm^2$

$- 25.12$

$505.92\ cm^2$

~ PAGE 40

3 a, b, c

a) $121\ cm^2$

b) $117\ cm^2$

c) $283\ cm^2$

#4 a, b — $98.1\ cm^2$ | $62.1\ cm^2$

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

$2081.3\ cm^2$