Warm Up

Find the total surface area

$a^2 + b^2 = c^2$
$6^2 + 8^2 = c^2$
$36 + 64 = c^2$
$\sqrt{100} = \sqrt{c^2}$
$c = 10$

22 cm
12 cm
8 cm
12 cm

Front/Back
$A = \dfrac{b \times h}{2}$
$= \dfrac{12 \times 8}{2}$
$= \dfrac{96}{2} = 48 cm^2$

Left/Right
10
22
$A = b \times h$
$= 22 \times 10$
$= 220 cm^2$

Bottom
22
12
$A = b \times h$
$= 12 \times 22$
$= 264 cm^2$

$SA = 48 + 48 + 220 + 220 + 264$
$= 800 cm^2$

Cylinder:

circumference of circle
6.28
12
$Cir = 2\pi r$
$= 2\pi(1)$
$= 6.28 cm$

$A = \pi r^2$
$= \pi(1)^2$
$= 3.14 cm^2$

$A = b \times h$
$= 6.28 \times 12$
$= 75.36 cm^2$

$SA = 3.14 + 3.14 + 75.36$
$= 81.64 cm^2$

overlap: $3.14 + 3.14 = 6.28 cm^2$

$Total = 800 + 81.64 - 6.28$
$= 875.36 cm^2$

Warm Up

Find the total surface area

$c^2 = a^2 + b^2$
$c^2 = 8^2 + 6^2$
$c^2 = 64 + 36$
$\sqrt{c^2} = \sqrt{100}$
$c = 10$

22 cm
12 cm
10
8 cm
12 cm

Prism

12
$A = \dfrac{b \times h}{2}$
$A = \dfrac{12 \times 8}{2}$
$A = 48$
$2A_\triangle = 96 cm^2$

22
12
① $A = b \times h$
$A = 12 \times 22$
$A = 264 cm^2$

22
10
② $A = b \times h$
$A = 10 \times 22$
$A = 220$
$2A = 440$

$SA = 800 cm^2$
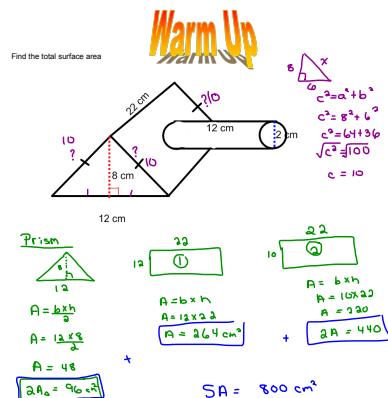
Cylinder
$SA = 2\pi r^2 + 2\pi r h$
$= 2(3.14)(1)^2 + 2(3.14)(1)(12)$
$= 6.28 + 75.36$
$= 81.64 cm^2$

overlap
② $A = \pi r^2$
$2A = 2(\pi r^2)$
$= 2(3.14)(1)^2$
$= 6.28 cm^2$

$T_{SA} =$ Prism + cylinder − over
$= 800 + 81.64 - 6.28$
$= 875.36 cm^2$