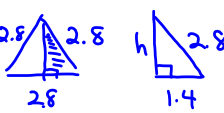


Problems with the homework?

Page 41 (5b, 6, 7a Include bottom)

5. b)  $a^2 = c^2 - b^2$
 $h^2 = 2.8^2 - 1.4^2$
 $= 7.84 - 1.96$
 $= 5.88$
 $h = \sqrt{5.88}$
 $= 2.4 \text{ cm}$

$$A_{\text{triangles}} = \frac{bh}{2} \times 2$$

$$= \frac{2.8(2.4)}{2} \times 2$$

$$= 6.72 \text{ cm}^2$$

$$A_{\Delta \text{ sides}} = b \times h \times 2$$

$$= (2.8)(1.2) \times 2$$

$$= 6.72 \text{ cm}^2$$

Box

$$A = A_{\text{front/back}} + A_{\text{sides}} + A_{\text{top/bottom}}$$

$$= 4.8 \times 1.4 \times 2 + 1.4 \times 2.8 \times 2 + 2.8 \times 4.8 \times 2$$

$$= 13.44 + 7.84 + 26.88$$

$$= 48.16 \text{ cm}^2$$

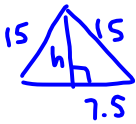
$$A_{\text{total}} = 6.72 + 6.72 + 48.16 - 3.36$$

$$= 58.24 \text{ cm}^2$$

overlap = bh
 $= (2.8)(1.2)$
 $= 3.36 \text{ cm}^2$

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6. $A_{\text{cylinder}} = 2\pi r^2 + 2\pi r h$
 $= 2\pi(2)^2 + 2\pi(2)(30)$
 $= 8\pi + 120\pi$
 $= 128\pi \text{ cm}^2$

 $a^2 = c^2 - b^2$
 $h^2 = 15^2 - 7.5^2$
 $= 225 - 56.25$
 $= 168.75$
 $h = \sqrt{168.75}$
 $= 13 \text{ cm}$

$$A_{\text{triangles}} = \frac{bh}{2} \times 2$$

$$= \frac{15(13)}{2} \times 2$$

$$= 195 \text{ cm}^2$$

$$A_{\text{rectangles}} = 15(3) \times 3$$

$$= 135 \text{ cm}^2$$

$$\text{overlap} = \pi r^2 \times 2$$

$$= \pi(2)^2 \times 2$$

$$= 8\pi$$

$$A_{\text{total}} = 128\pi + 195 + 135 - 8\pi$$

$$= 120\pi + 330$$

$$= 707 \text{ cm}^2$$

7. a) Box

$$\begin{aligned}A &= A_{\text{front/back}} + A_{\text{sides}} + A_{\text{(bottom)}} \\ &= (3)(2) \times 2 + (2)(2) \times 2 + 2(3) \\ &= 12 + 8 + 6 \\ &= 20\text{m}^2\end{aligned}$$

Roof

$$\begin{aligned}A_{\text{triangles}} &= \frac{bh \times 2}{2} \\ &= \frac{(2)(0.75) \times 2}{2} \\ &= 1.5\text{m}^2\end{aligned}$$

$$\begin{aligned}A_{\text{top}} &= lw \times 2 \\ &= (1.25)(3) \times 2 \\ &= 7.5\text{m}^2\end{aligned}$$

$$\begin{aligned}A_{\text{total}} &= 26 + 1.5 + 7.5 \\ &= 35\text{m}^2\end{aligned}$$

Homework

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