

Chapter 10

Geometry and Measurement

10.6 Surface Area of a Prism

Pages- 545-549

NOTES (10.6) Surface Area of a Prism

The **surface area (S)** of a prism is the sum of the areas of its faces.

Guided Practice pp 547-548

Write entire sentence for #2

Do # 4-8 even like this

5) top & bottom $m = A = bh$

$$A = 4 \cdot 6$$

$$A = 24$$

Sides $= A = bh$

$$A = 6 \cdot 5$$

$$A = 30$$

Front & back $= A = bh$

$$A = 4 \cdot 5$$

$$A = 20$$

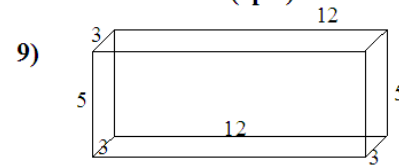
$$S = 2(24) + 2(30) + 2(20)$$

$$A = 48 + 60 + 40$$

$$S = 108 + 40$$

$$S = 148 \text{ ft}^2$$

Do # 10 like this = (2pts)

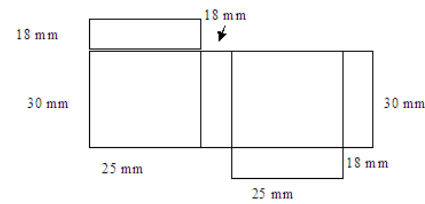


$$\begin{aligned} &2(5 \cdot 3) + 2(3 \cdot 12) + 2(5 \cdot 12) \\ &2 \cdot 15 + 2 \cdot 36 + 2 \cdot 60 \\ &30 + 72 + 120 \\ &102 + 120 = 222 \text{ in}^2 \end{aligned}$$

Do #14 like this

A net is a 2-dimensional figure that can be folded to form a solid.

13)



$$\begin{aligned} S &= 2(18 \times 25) + \\ &2(30 \times 25) + \\ &2(30 \times 18) \end{aligned}$$

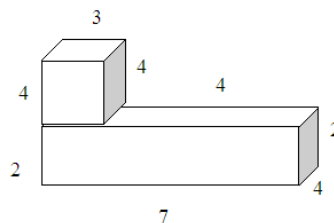
$$\begin{aligned} S &= 2(450) + 2(750) + \\ &2(540) \end{aligned}$$

$$\begin{aligned} S &= 2(450 + 750 + 540) \\ S &= 2(1740) \end{aligned}$$

$$S = 3480 \text{ mm}^2$$

#18 = 1 pt
Do # 20 like this

19)



Prism 1 = 68 ft^2

$$S = 2(4 \times 3) + (3 \times 4) + 2(4 \times 4)$$

$$S = 2 \cdot 12 + 12 + 16 + 16$$

$$S = 24 + 12 + 16 + 16$$

$$S = 36 + 32$$

$$S = 68$$

Prism 2 = 88 ft^2

$$S = 2(7 \cdot 2) + (7 \cdot 4) + (4 \cdot 4) + 2(4 \cdot 2)$$

$$S = 2 \cdot 14 + 28 + 16 + 2 \cdot 8$$

$$S = 28 + 28 + 16 + 16$$

$$S = 56 + 32 = 88$$

$$\text{Total SA} = 68 + 88 = 156 \text{ ft}^2$$