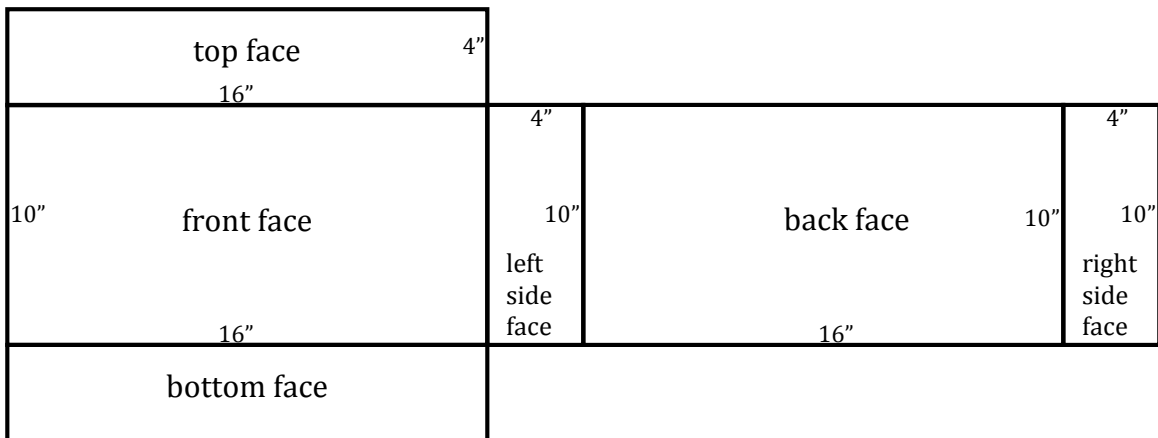


Middle School Geometry Lesson 3 Practice Worksheet Answer Key

1) Student created figure

$$\begin{aligned}
 2) \text{ Surface area} &= 2(lw + hl + hw) \\
 &= 2(4 \cdot 16 + 10 \cdot 16 + 10 \cdot 4) \\
 &= 2(64 + 160 + 40) \\
 &= 2(264) \\
 &= 528 \text{ in}^2
 \end{aligned}$$

3) One possible net:



Shape/Face	Area Formula	Formula with Values	Area (unit <sup>2</sup> )
rectangle/front	$A = l \cdot w$	$A = 16 \cdot 10$	160 in <sup>2</sup>
rectangle/back	$A = l \cdot w$	$A = 16 \cdot 10$	160 in <sup>2</sup>
rectangle/top	$A = l \cdot w$	$A = 4 \cdot 16$	64 in <sup>2</sup>
rectangle/bottom	$A = l \cdot w$	$A = 4 \cdot 16$	64 in <sup>2</sup>
rectangle/left side	$A = l \cdot w$	$A = 4 \cdot 10$	40 in <sup>2</sup>
rectangle/right side	$A = l \cdot w$	$A = 4 \cdot 10$	40 in <sup>2</sup>

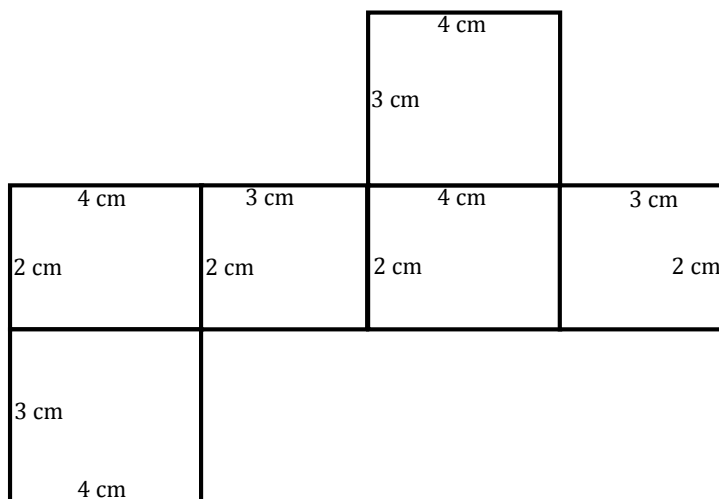
$$\text{Total area: } 160 + 160 + 64 + 64 + 40 + 40 = 528 \text{ in}^2$$

4) A is not a net for a rectangular prism.

B is a net for a rectangular prism.

Middle School Geometry Lesson 3 Practice Worksheet Answer Key

5) One possible net:



Shape/Face	Area Formula	Formula with Values	Area (units <sup>2</sup> )
rectangle/top	$A = l \cdot w$	$A = 4 \cdot 3$	$12 \text{ cm}^2$
rectangle/front	$A = l \cdot w$	$A = 2 \cdot 4$	$8 \text{ cm}^2$
rectangle/left side	$A = l \cdot w$	$A = 2 \cdot 3$	$6 \text{ cm}^2$
rectangle/back	$A = l \cdot w$	$A = 2 \cdot 4$	$8 \text{ cm}^2$
rectangle/bottom	$A = l \cdot w$	$A = 3 \cdot 4$	$12 \text{ cm}^2$
rectangle/right side	$A = l \cdot w$	$A = 2 \cdot 3$	$6 \text{ cm}^2$

$$\text{Total area} = 12 + 8 + 6 + 8 + 12 + 6 = 52 \text{ cm}^2$$

$$\text{Surface area} = 2 (lw + hl + hw)$$

$$l = 4 \text{ cm} \quad w = 3 \text{ cm} \quad h = 2 \text{ cm}$$

$$\begin{aligned} \text{Surface area} &= 2 (4 \cdot 3 + 2 \cdot 4 + 2 \cdot 3) \\ &= 2 (12 + 8 + 6) \\ &= 2 (26) \\ &= 52 \text{ cm}^2 \end{aligned}$$

6) Surface area = 2 (lw + hl + hw)

$$l = 18 \text{ in} \quad w = 14 \text{ in} \quad h = 8 \text{ in}$$

$$\begin{aligned} \text{Surface area} &= 2 (18 \cdot 14 + 8 \cdot 18 + 8 \cdot 14) \\ &= 2 (252 + 144 + 112) \\ &= 2 (508) \\ &= 1016 \text{ in}^2 \end{aligned}$$