ANSWER PRESENTATION TOOL

Green - Student Edition 8 Chapter Rev 1-15 ALL EVEN ODD Show Solu

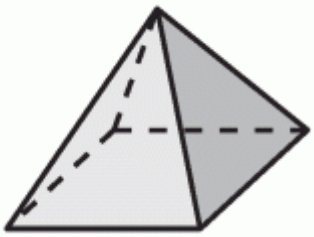
1. The solid has 1 face on the bottom, 1 face on the top, and 4 faces on the sides. The faces intersect at 12 different line segments. The edges intersect at 8 different points.

So, the solid has 6 faces, 12 edges, and 8 vertices.

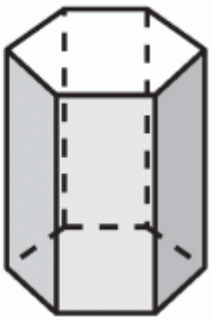
2. The solid has 1 face on the bottom and 5 faces on the sides. The faces intersect at 10 different line segments. The edges intersect at 6 different points.

So, the solid has 6 faces, 10 edges, and 6 vertices.

3.



4.



5. Use a net to find the area of each face.

Top: $7 \cdot 2 = 14$

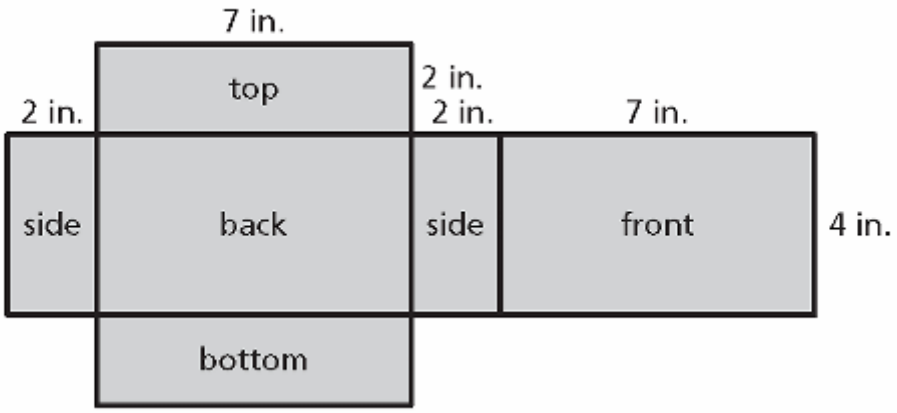
Bottom: $7 \cdot 2 = 14$

Front: $7 \cdot 4 = 28$

Back: $7 \cdot 4 = 28$

Side: $2 \cdot 4 = 8$

Side: $2 \cdot 4 = 8$



Surface Area	=	Area of top	+	Area of bottom	+	Area of front	+	Area of back	+	Area of a side	+	Area of a side
S	=	14	+	14	+	28	+	28	+	8	+	8
	=	100										

So, the surface area is 100 square inches.

6. Use a net to find the area of each face.

Top: $7.5 \bullet 5 = 37.5$

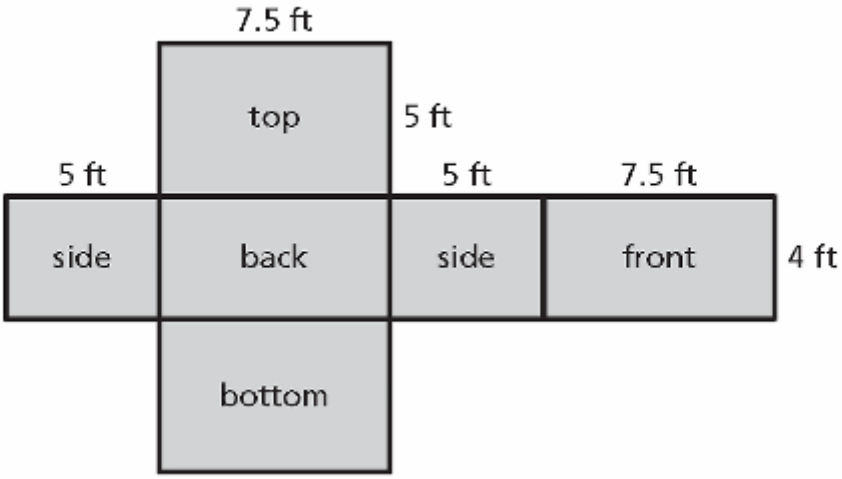
Bottom: $7.5 \bullet 5 = 37.5$

Front: $7.5 \bullet 4 = 30$

Back: $7.5 \bullet 4 = 30$

Side: $5 \bullet 4 = 20$

Side: $5 \bullet 4 = 20$



$$\begin{array}{lllllllllll} \text{Surface Area} & = & \text{Area of top} & + & \text{Area of bottom} & + & \text{Area of front} & + & \text{Area of back} & + & \text{Area of a side} & + & \text{Area of a side} \\ S & = & 37.5 & + & 37.5 & + & 30 & + & 30 & + & 20 & + & 20 \\ & = & 175 & & & & & & & & & & \end{array}$$

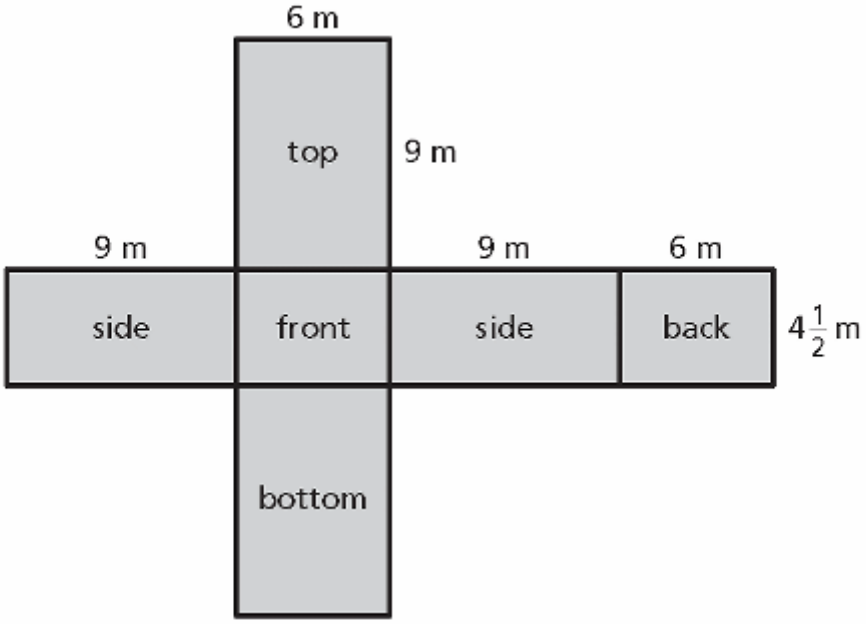
So, the surface area is 175 square feet.

7. Use a net to find the area of each face.

Top: $6 \bullet 9 = 54$ Bottom: $6 \bullet 9 = 54$

Front: $6 \bullet 4\frac{1}{2} = 27$ Back: $6 \bullet 4\frac{1}{2} = 27$

Side: $9 \bullet 4\frac{1}{2} = 40.5$ Side: $9 \bullet 4\frac{1}{2} = 40.5$



Surface Area = Area of top + Area of bottom + Area of front + Area of back + Area of a side + Area of a side

$S = 54 + 54 + 27 + 27 + 40.5 + 40.5$

$= 243$

So, the surface area is 243 meters.

8. Use a net to find the area of each face.

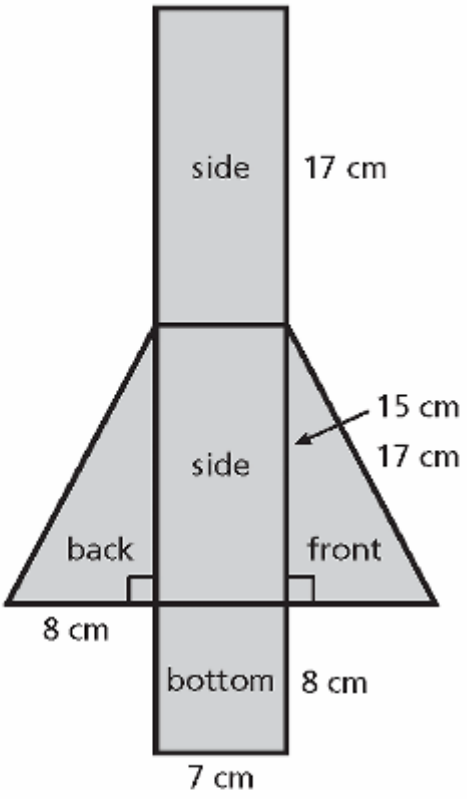
Front: $\frac{1}{2} \cdot 8 \cdot 15 = 60$

Back: $\frac{1}{2} \cdot 8 \cdot 15 = 60$

Bottom: $7 \cdot 8 = 56$

Side: $7 \cdot 17 = 119$

Side: $7 \cdot 15 = 105$



$$\begin{array}{lccccccc} \text{Surface Area} & = & \text{Area of bottom} & + & \text{Area of front} & + & \text{Area of back} & + \text{Area of a side} + \text{Area of a side} \\ S & = & 56 & + & 60 & + & 60 & + 119 + 105 \\ & = & 400 & & & & & \end{array}$$

So, the surface area is 400 square centimeters.

9. Use a net to find the area of each face.

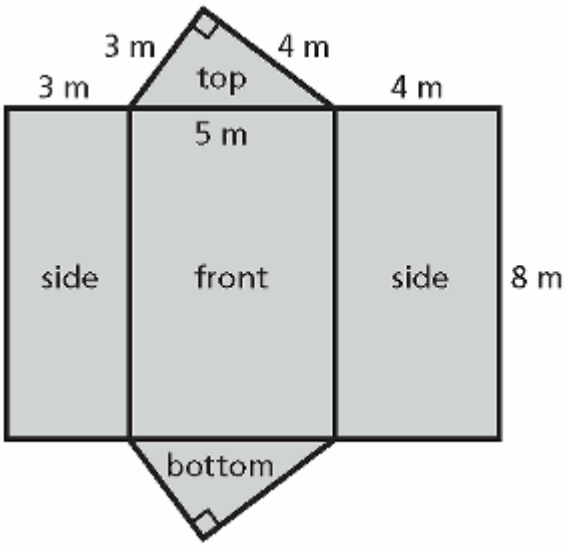
Top: $\frac{1}{2} \cdot 3 \cdot 4 = 6$

Bottom: $\frac{1}{2} \cdot 3 \cdot 4 = 6$

Front: $5 \cdot 8 = 40$

Side: $3 \cdot 8 = 24$

Side: $4 \cdot 8 = 32$



Surface Area	=	Area of top	+	Area of bottom	+	Area of front	+	Area of a side	+	Area of a side
S	=	6	+	6	+	40	+	24	+	32
	=	108								

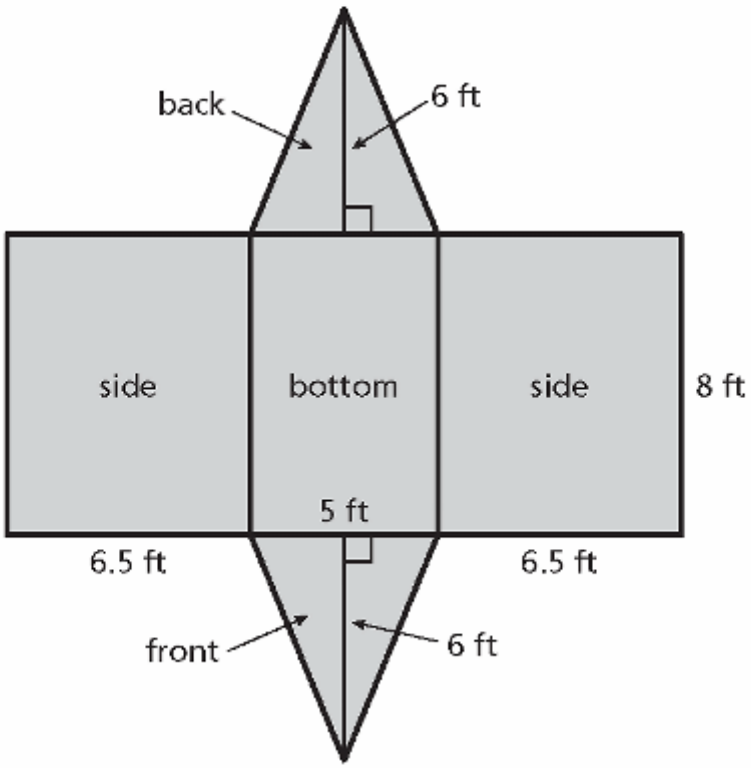
So, the surface area is 108 square meters.

10. Use a net to find the area of each face.

Bottom: $8 \bullet 5 = 40$

Front: $\frac{1}{2} \bullet 6 \bullet 5 = 15$ Back: $\frac{1}{2} \bullet 6 \bullet 5 = 15$

Side: $8 \bullet 6.5 = 52$ Side: $8 \bullet 6.5 = 52$



Surface Area	=	Area of bottom	+	Area of front	+	Area of back	+	Area of a side	+	Area of a side
S	=	40	+	15	+	15	+	52	+	52
	=	174								

So, the surface area is 174 square feet.

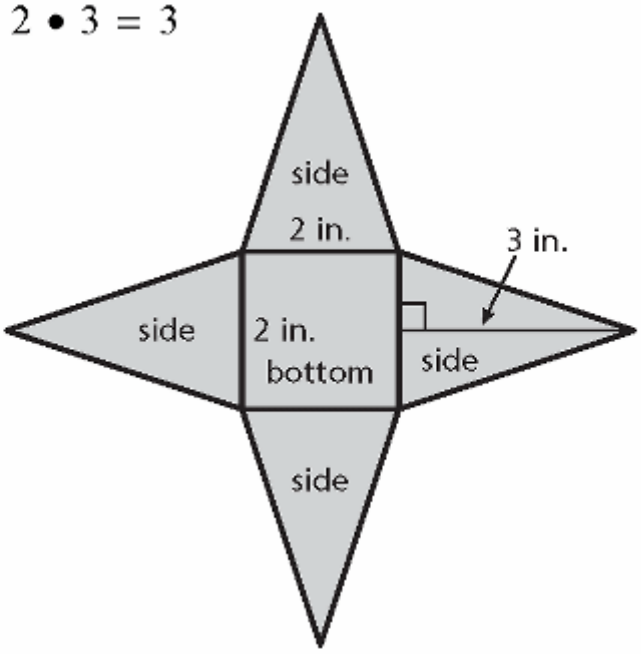
11. Use a net to find the area of each face.

Bottom: $2 \cdot 2 = 4$

Side: $\frac{1}{2} \cdot 2 \cdot 3 = 3$

Side: $\frac{1}{2} \cdot 2 \cdot 3 = 3$

Side: $\frac{1}{2} \cdot 2 \cdot 3 = 3$



Surface Area	=	Area of bottom	+	Area of a side	+	Area of a side	+	Area of a side	+	Area of a side
S	=	4	+	3	+	3	+	3	+	3
	=	16								

So, the surface area is 16 square inches.

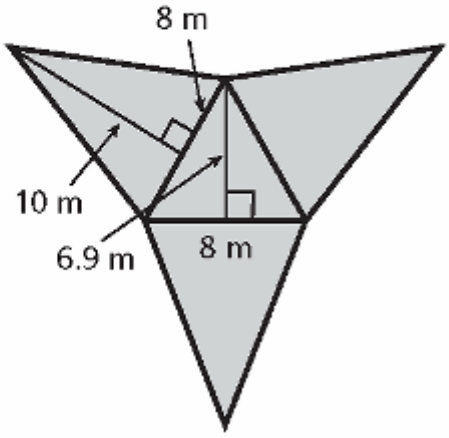
12. Use a net to find the area of each face.

Bottom: $\frac{1}{2} \cdot 8 \cdot 6.9 = 27.6$

Side: $\frac{1}{2} \cdot 8 \cdot 10 = 40$

Side: $\frac{1}{2} \cdot 8 \cdot 10 = 40$

Side: $\frac{1}{2} \cdot 8 \cdot 10 = 40$



Surface Area	=	Area of bottom	+	Area of a side	+	Area of a side	+	Area of a side
S	=	27.6	+	40	+	40	+	40
	=	147.6						

So, the surface area is 147.6 square meters.

13. Use a net to find the area of each face.

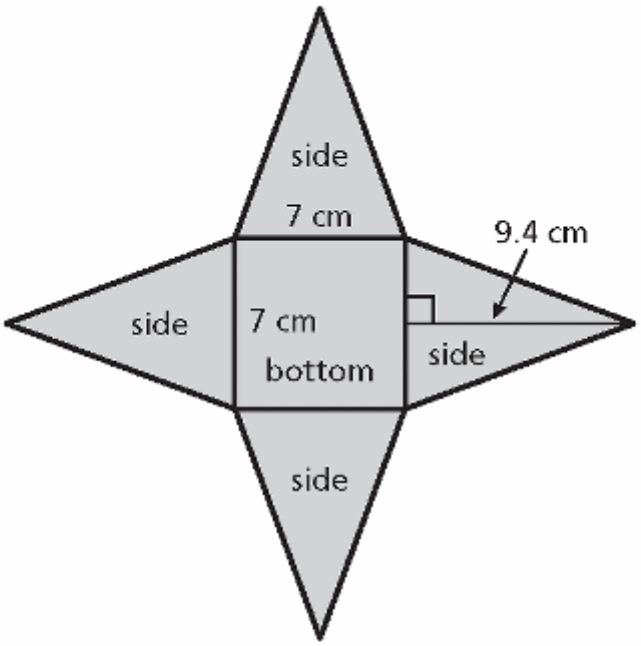
Bottom: $7 \cdot 7 = 49$

Side: $\frac{1}{2} \cdot 7 \cdot 9.4 = 32.9$

Side: $\frac{1}{2} \cdot 7 \cdot 9.4 = 32.9$

Side: $\frac{1}{2} \cdot 7 \cdot 9.4 = 32.9$

Side: $\frac{1}{2} \cdot 7 \cdot 9.4 = 32.9$



$$\begin{array}{lcl} \text{Surface Area} & = & \text{Area of bottom} + \text{Area of a side} + \text{Area of a side} + \text{Area of a side} + \text{Area of a side} \\ S & = & 49 + 32.9 + 32.9 + 32.9 + 32.9 \\ & = & 180.6 \end{array}$$

So, the surface area is 180.6 square centimeters.

14. $V = \ell wh$

$$= \frac{5}{2}\left(\frac{3}{2}\right)\left(\frac{4}{3}\right)$$

$$= \frac{60}{12}, \text{ or } 5$$

So, the volume is 5 cubic feet.

15. $V = \ell wh$

$$= \frac{1}{2}\left(\frac{2}{3}\right)\left(1\frac{5}{6}\right)$$

$$= \frac{22}{36}, \text{ or } \frac{11}{18}$$

So, the volume is $\frac{11}{18}$ cubic feet.