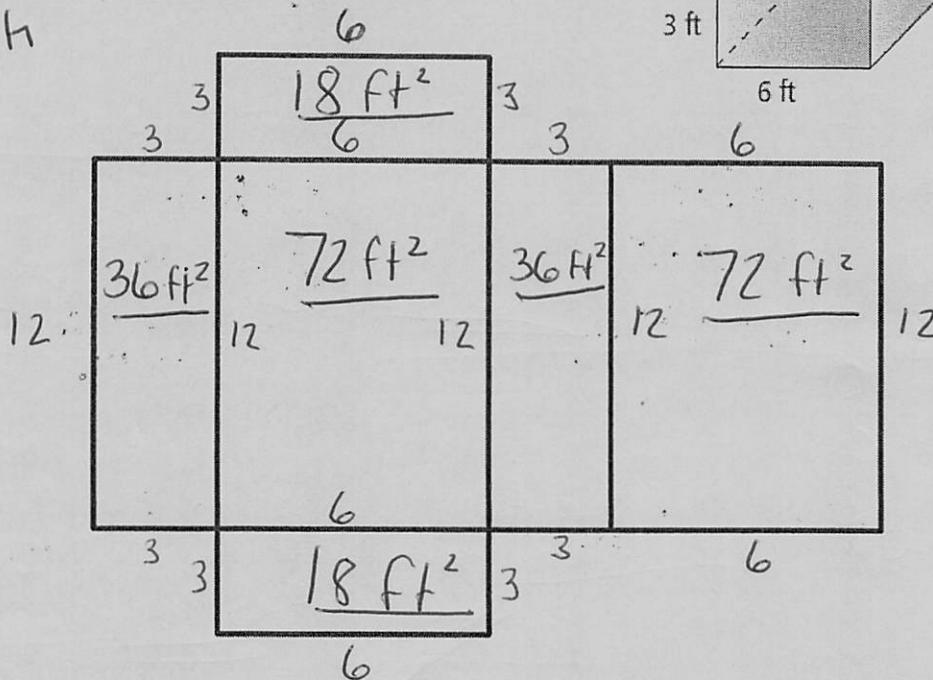
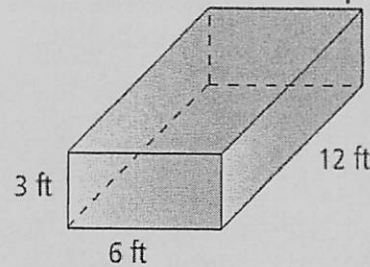


Surfaces Area Practice

Name key

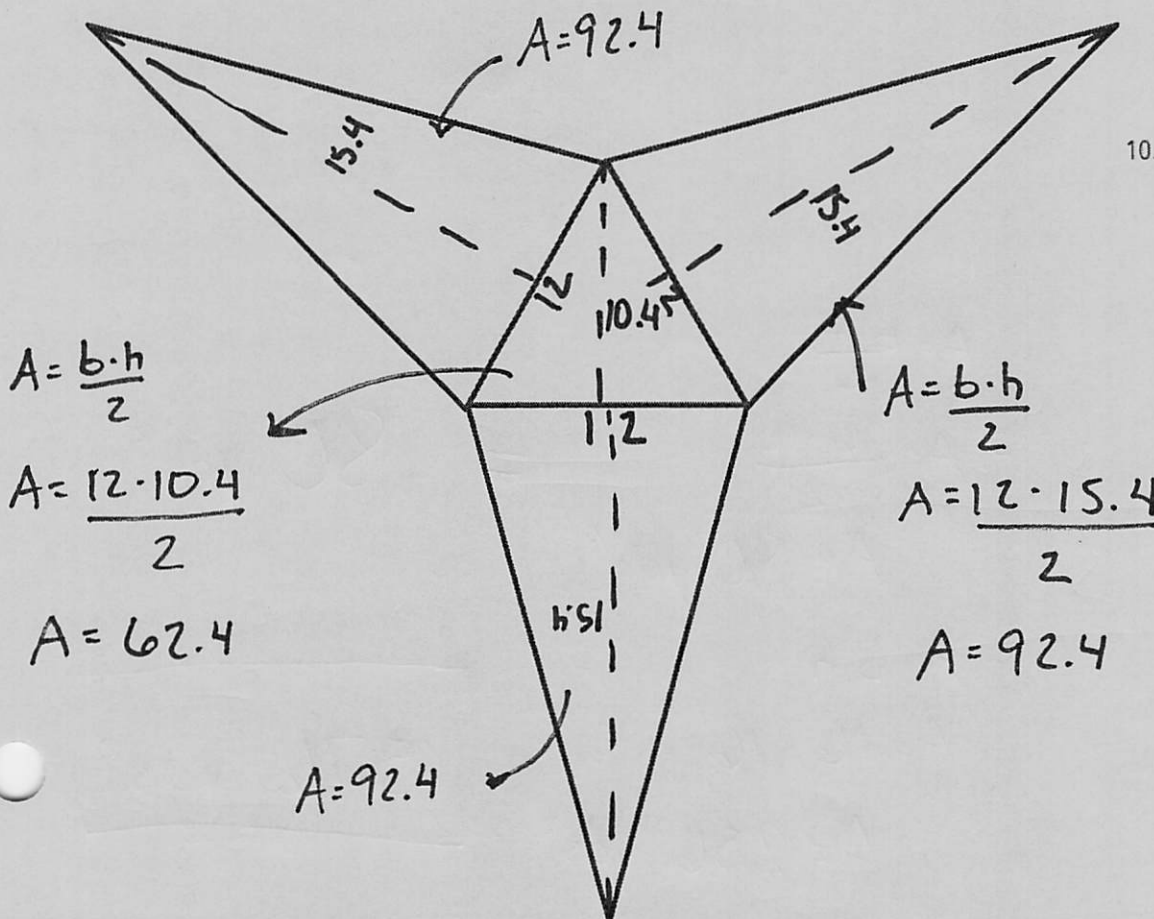
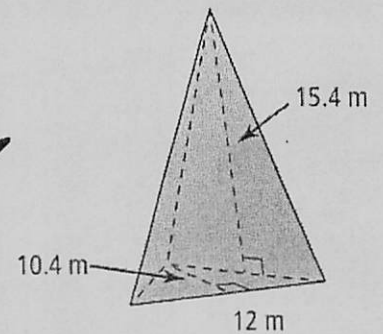
1. Find the Surface Area of the Rectangular Prism.

$$A = b \cdot h$$



$$\begin{array}{r} 18 \\ 36 \\ 72 \\ 18 \\ 36 \\ + 72 \\ \hline 252 \text{ ft}^2 \end{array}$$

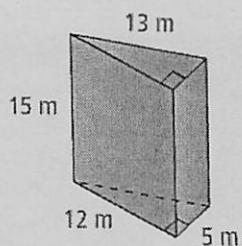
Find the Surface Area of the Regular Triangular Pyramid.



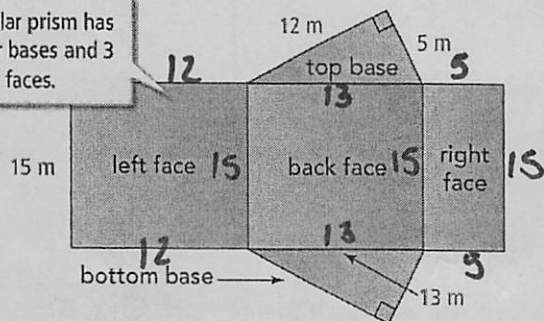
$$\begin{array}{r} 92.4 \\ 92.4 \\ 92.4 \\ + 62.4 \\ \hline 339.6 \text{ m}^2 \end{array}$$

Example:

3. Find the Surface Area of the Triangular Prism.

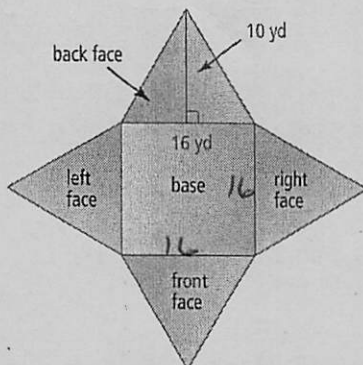
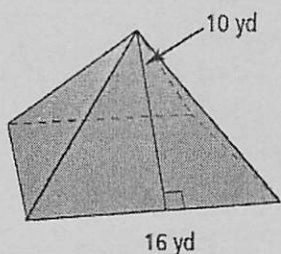


The triangular prism has 2 triangular bases and 3 rectangular faces.



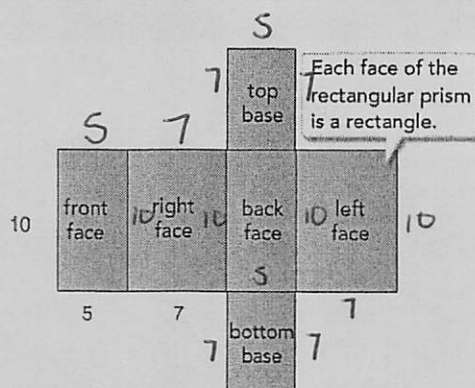
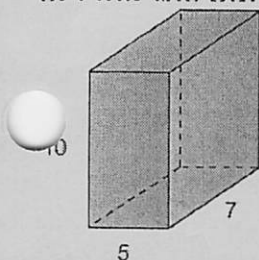
Left Face $A = b \cdot h$ $A = 15 \cdot 12$ $A = 180 \text{ m}^2$	Back Face $A = b \cdot h$ $A = 13 \cdot 15$ $A = 195 \text{ m}^2$	Right Face $A = b \cdot h$ $A = 5 \cdot 15$ $A = 75 \text{ m}^2$
Top Base $A = \frac{b \cdot h}{2}$ $A = \frac{5 \cdot 12}{2}$ $A = 30 \text{ m}^2$	Bottom Base $= 30 \text{ m}^2$	Total Surface Area: 510 m^2

4. Find the Surface Area of the Square Pyramid.



Front Face 80 yds^2	Back Face $A = \frac{b \cdot h}{2}$ $A = \frac{16 \cdot 10}{2}$ $A = 80 \text{ yds}^2$	Right Face 80 yds^2
Left Face 80 yds^2	Base $A = b \cdot h$ $A = 16 \cdot 16$ $A = 256 \text{ yds}^2$	Total Surface Area: 576 yds^2

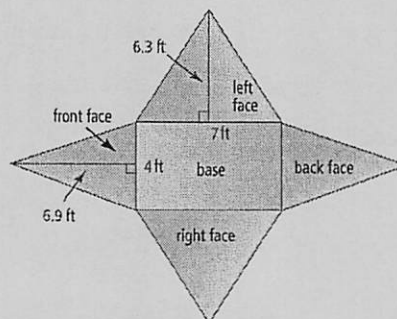
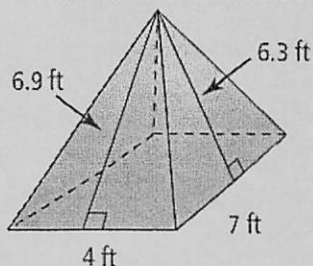
5. Find the Surface Area of the Rectangular Prism.



Front Face $A = b \cdot h$ $A = 10 \cdot 5$ $A = 50$	Right Face $A = b \cdot h$ $A = 10 \cdot 7$ $A = 70$	Back Face $A = b \cdot h$ $A = 10 \cdot 5$ $A = 50$
Top Base $A = b \cdot h$ $A = 5 \cdot 7$ $A = 35$	Bottom Base $A = b \cdot h$ $A = 5 \cdot 7$ $A = 35$	Left Base $A = b \cdot h$ $A = 10 \cdot 7$ $A = 70$

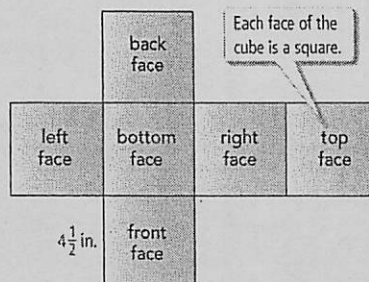
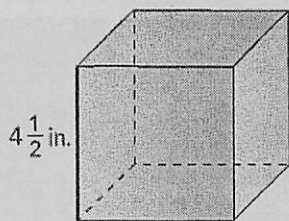
Total Surface Area: 310

6. Find the Surface Area of the Rectangular Pyramid.



Front Face $A = \frac{b \cdot h}{2}$ $A = \frac{4 \cdot 6.9}{2}$ $A = 13.8 \text{ ft}^2$	Right Face $= \text{Left Face}$ $A = 22.05 \text{ ft}^2$	Back Face $= \text{Front Face}$ $A = 13.8 \text{ ft}^2$
Left Face $A = \frac{b \cdot h}{2}$ $A = \frac{7 \cdot 6.3}{2}$ $A = 22.05 \text{ ft}^2$	Base $A = b \cdot h$ $A = 7 \cdot 4$ $A = 28 \text{ ft}^2$	Total Surface Area: 99.7 ft²

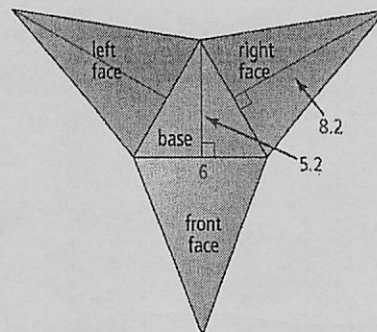
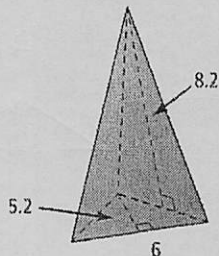
7. Find the Surface Area of the Cube



Front Face $A = b \cdot h$ $A = 4\frac{1}{2} \cdot 4\frac{1}{2}$ $A = \frac{9}{2} \cdot \frac{9}{2}$ $A = \frac{81}{4} = 20\frac{1}{4} \text{ in}^2$	Left Face $= 20\frac{1}{4} \text{ in}^2$	Back Face $= 20\frac{1}{4} \text{ in}^2$
Bottom Face $= 20\frac{1}{4} \text{ in}^2$	Right Face $= 20\frac{1}{4} \text{ in}^2$	Top Face $= 20\frac{1}{4} \text{ in}^2$

Total Surface Area: $20\frac{1}{4} \cdot 6 = \frac{81}{4} \cdot \frac{6}{1} = \frac{243}{2} = 121\frac{1}{2} \text{ in}^2$

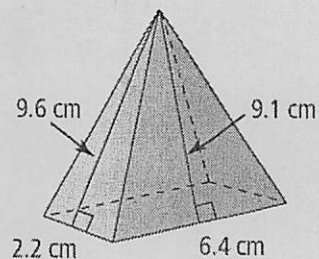
8. Find the Surface Area of the Regular Triangular Pyramid.



Left Face $A = 24.6$	Right Face $A = \frac{b \cdot h}{2}$ $A = \frac{6 \cdot 8.2}{2}$ $A = 24.6$	Front Face $A = 24.6$
Base $A = \frac{b \cdot h}{2}$ $A = \frac{6 \cdot 5.2}{2}$ $A = 15.6$		Total Surface Area: 89.4

Example

Find the surface area of the rectangular pyramid to the nearest square centimeter.



Left and Right Face

$$A = \frac{b \cdot h}{2}$$

$$A = \frac{2 \cdot 2 \cdot 9.6}{2}$$

$$A = 10.56 \text{ cm}^2 \times 2 = \underline{21.12 \text{ cm}^2}$$

Base;

$$A = b \cdot h$$

$$A = 2.2 \cdot 6.4$$

$$A = \underline{14.08 \text{ cm}^2}$$

Example

The mailing package has the shape of a regular triangular prism. Find how many square inches of cardboard it takes to make the mailing package. Round your answer to the nearest square inch.

Rectangular Faces $\times 3$

$$A = b \cdot h$$

$$A = 25 \cdot 6$$

$$A = 150 \text{ in}^2 \times 3 = \underline{450 \text{ in}^2}$$

Triangle Bases $\times 2$

$$A = \frac{b \cdot h}{2}$$

$$A = \frac{6 \cdot 5.2}{2}$$

$$A = 15.6 \text{ in}^2 \times 2 = \underline{31.2 \text{ in}^2}$$

Front and Back Face

$$A = \frac{b \cdot h}{2}$$

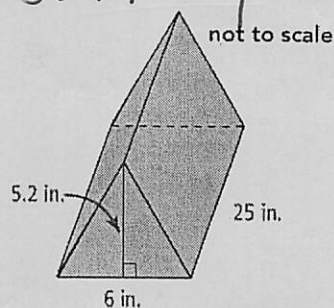
$$A = \frac{6.4 \cdot 9.1}{2}$$

$$A = 29.12 \text{ cm}^2 \times 2 =$$

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

$$\begin{array}{r} 21.12 \\ 58.24 \\ + 14.08 \\ \hline \end{array}$$

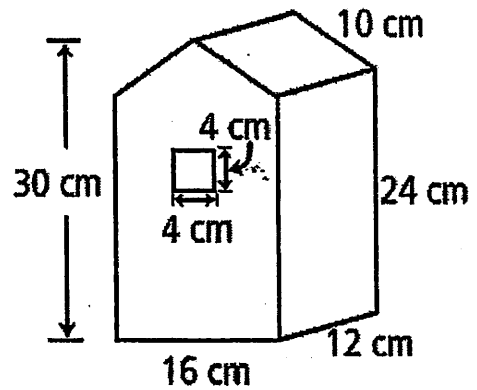
$$SA = 93.44 \text{ cm}^2$$



$$\begin{array}{r} 450 \\ + 31.2 \\ \hline \end{array}$$
$$481.2 \text{ in}^2$$

Challenge:

You plan to build a birdhouse with one square doorway as shown. How many square centimeters of wood do you need to make the birdhouse?



Bottom

$$16 \cdot 12 = \underline{192 \text{ cm}^2}$$

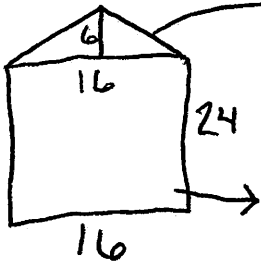
Sides $\times 2$

$$12 \cdot 24 = 288 \text{ cm}^2 \times 2 = \underline{576 \text{ cm}^2}$$

Roof $\times 2$

$$12 \cdot 10 = 120 \text{ cm}^2 \times 2 = \underline{240 \text{ cm}^2}$$

Back



$$A = \frac{6 \cdot 16}{2} = 48 \text{ cm}^2$$

$$A = 16 \cdot 24 = 324 \text{ cm}^2$$

$$\begin{array}{r} 324 \\ + 48 \\ \hline 372 \end{array}$$

$$\underline{432 \text{ cm}^2}$$

Surface Area

$$1856 \text{ cm}^2$$

Front

$$432 \text{ cm}^2 - 16 \text{ cm}^2 = \underline{416 \text{ cm}^2}$$