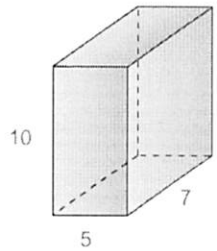
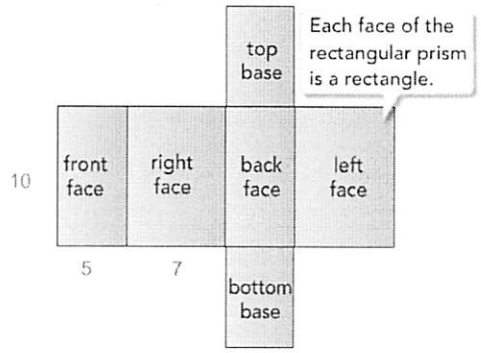
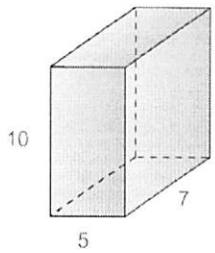
Lesson 14-3: Surface Areas of Prisms

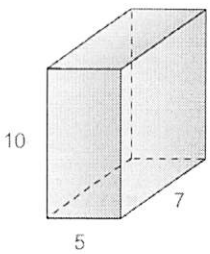
Example

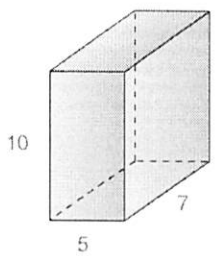
Find the surface area of the rectangular prism.

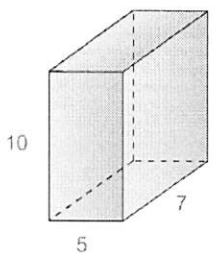


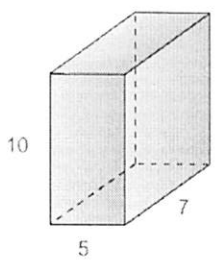


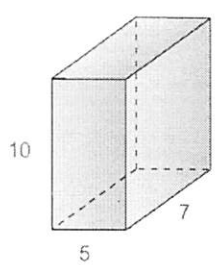






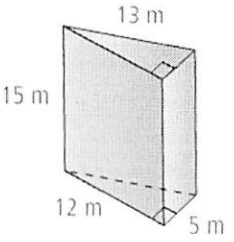


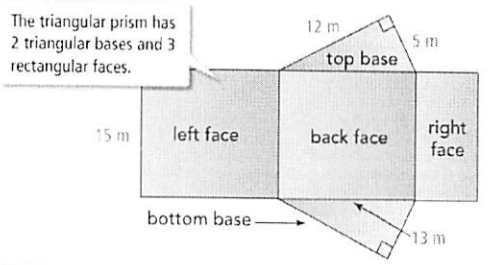


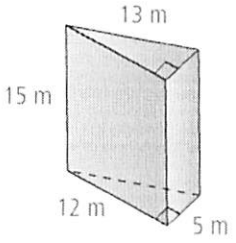


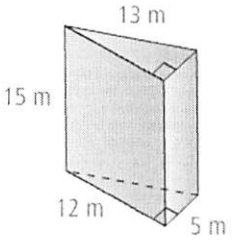
Got It?

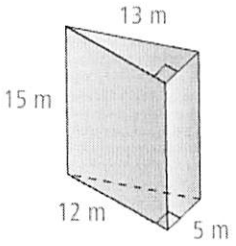
Find the surface area of the triangular prism.

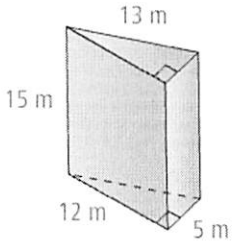


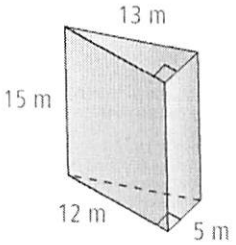






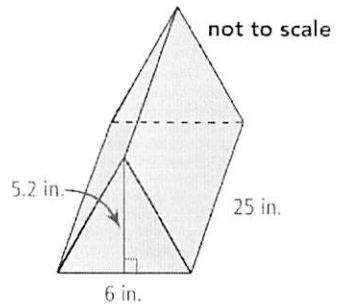






Example

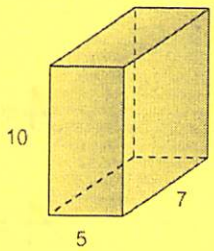
The mailing package has the shape of a regular triangular prism. Find how many square inches of cardboard it takes to make the mailing package. Round your answer to the nearest square inch.

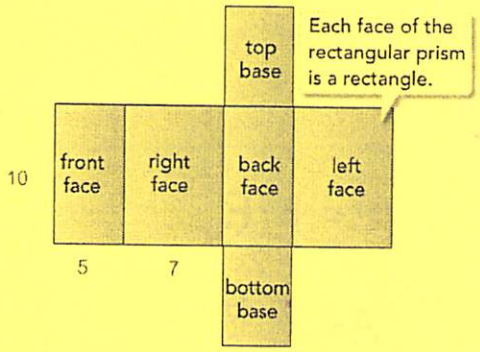


Lesson 14-3: Surface Areas of Prisms

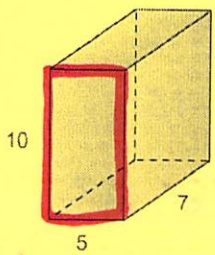
Example

Find the surface area of the rectangular prism.





Front Face

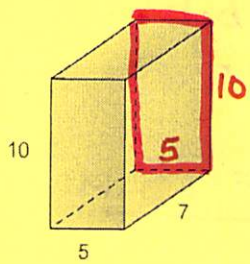


$A = b \cdot h$

$A = 5 \cdot 10$

$A = 50$

Back Face

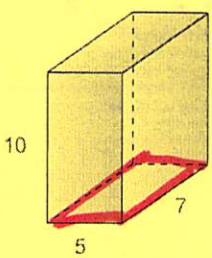


$A = b \cdot h$

$A = 5 \cdot 10$

$A = 50$

Bottom Face

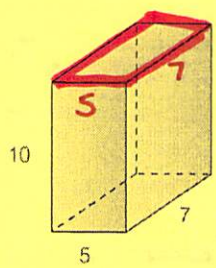


$A = b \cdot h$

$A = 7 \cdot 5$

$A = 35$

Top Face

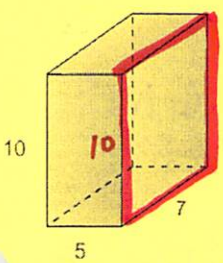


$A = b \cdot h$

$A = 7 \cdot 5$

$A = 35$

Right Face

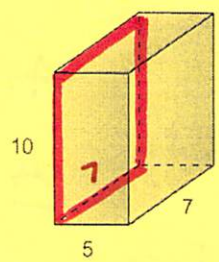


$A = b \cdot h$

$A = 7 \cdot 10$

$A = 70$

Left Face



$A = b \cdot h$

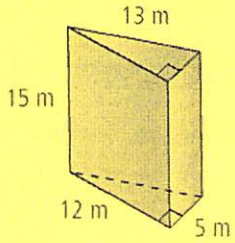
$A = 7 \cdot 10$

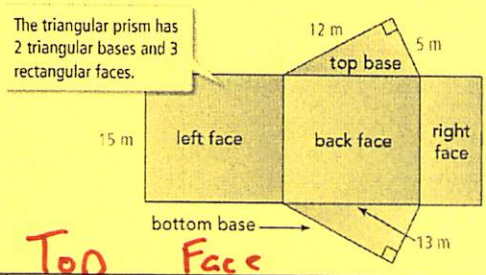
$A = 70$

Total Surface Area = 310 units²

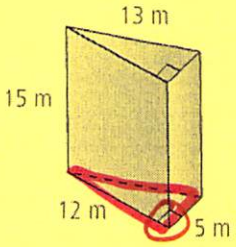
Got It?

Find the surface area of the triangular prism.





Bottom Face

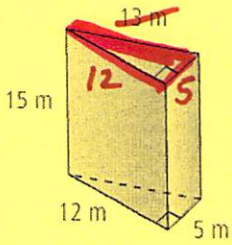


$A = \frac{b \cdot h}{2}$

$A = \frac{5 \cdot 12}{2}$

$A = 30\ m^2$

Top Face

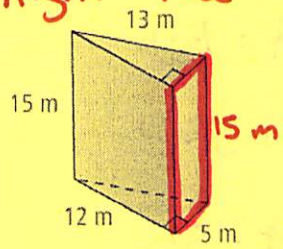


$A = \frac{b \cdot h}{2}$

$A = \frac{5 \cdot 12}{2}$

$A = 30\ m^2$

Right Face

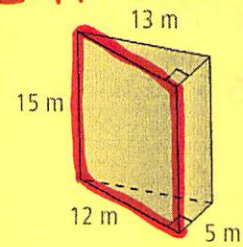


$A = b \cdot h$

$A = 5 \cdot 15$

$A = 75\ m^2$

Left Face

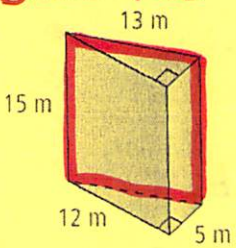


$A = 6 \cdot h$

$A = 12 \cdot 15$

$A = 180\ m^2$

Back Face



$A = b \cdot h$

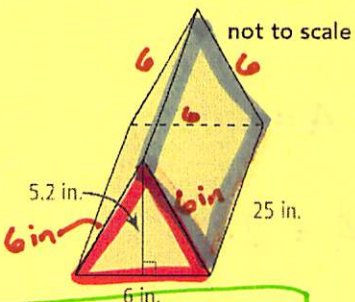
$A = 13 \cdot 15$

$A = 195\ m^2$

Total Surface Area $= 510\ m^2$

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.



Front Face = Back Face

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

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

$A = 15.6\ in^2$

$A = 15.6\ in^2$

Right Face = Left Face = Bottom Face

$A = b \cdot h$

$A = 25 \cdot 6$

$A = 150\ in^2$

$A = 150\ in^2$

$A = 150\ in^2$

Total SA $= 481\ in^2$