

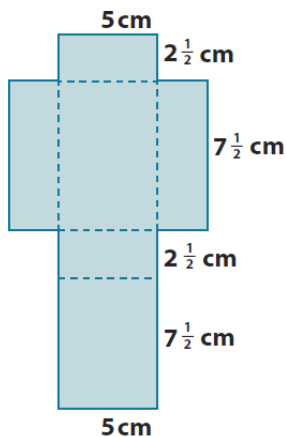
Lesson Summary

The surface area of a right prism can be obtained by adding the areas of the lateral faces to the area of the bases. The formula for the surface area of a right prism is $SA = LA + 2B$, where SA represents the surface area of the prism, LA represents the area of the lateral faces, and B represents the area of one base. The lateral area LA can be obtained by multiplying the perimeter of the base of the prism times the height of the prism.

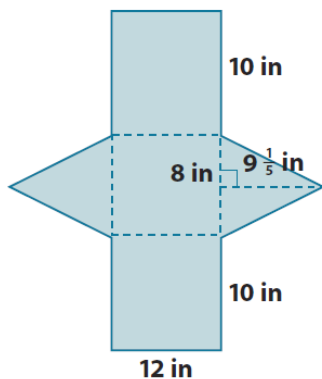
Problem Set

1. For each of the following nets, highlight the perimeter of the lateral area, draw the solid represented by the net, indicate the type of solid, and then find the solid's surface area.

a.

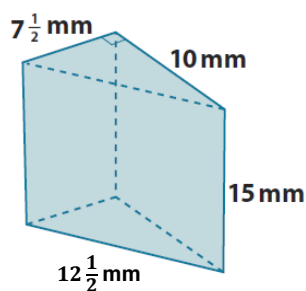


b.

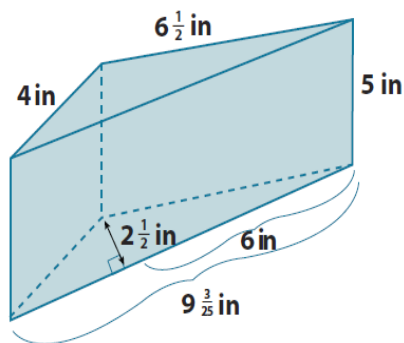


2. Given a cube with edges that are $\frac{3}{4}$ inch long:
- Find the surface area of the cube.
 - Joshua makes a scale drawing of the cube using a scale factor of 4. Find the surface area of the cube that Joshua drew.
 - What is the ratio of the surface area of the scale drawing to the surface area of the actual cube, and how does the value of the ratio compare to the scale factor?
3. Find the surface area of each of the following right prisms using the formula $SA = LA + 2B$.

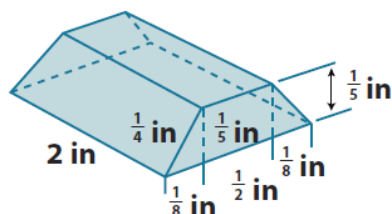
a.



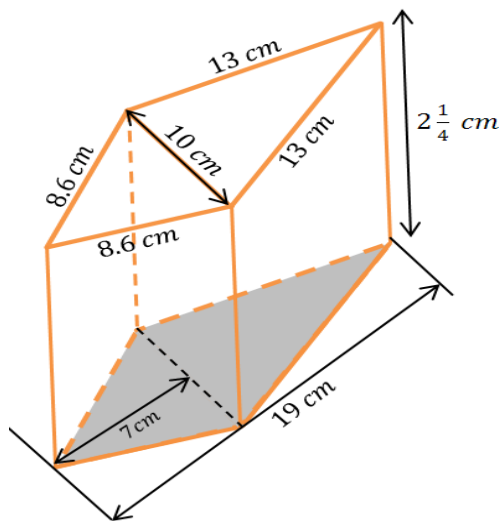
b.



c.



d.



4. A cube has a volume of 64 m^3 . What is the cube's surface area?
5. The height of a right rectangular prism is $4\frac{1}{2}$ ft. The length and width of the prism's base are 2 ft. and $1\frac{1}{2}$ ft. Use the formula $SA = LA + 2B$ to find the surface area of the right rectangular prism.
6. The surface area of a right rectangular prism is $68\frac{2}{3} \text{ in}^2$. The dimensions of its base are 3 in. and 7 in. Use the formula $SA = LA + 2B$ and $LA = Ph$ to find the unknown height h of the prism.
7. A given right triangular prism has an equilateral triangular base. The height of that equilateral triangle is approximately 7.1 cm. The distance between the bases is 9 cm. The surface area of the prism is $319\frac{1}{2} \text{ cm}^2$. Find the approximate lengths of the sides of the base.