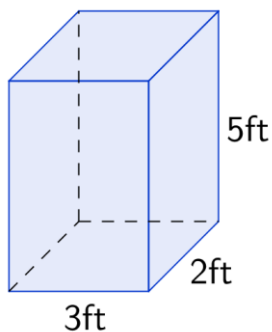


Additional Applications and Problem Solving

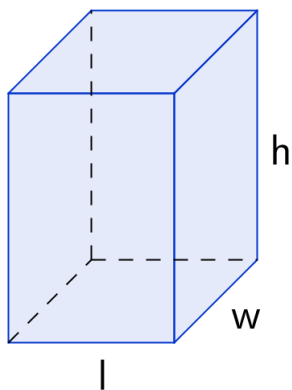
The total number of square units that completely cover the outer shell of a three-dimensional object is called the _____ of the object. It tells you how much material you would need to cover an object.

Ex 1.

What's the surface area of the following box?



Let's find a formula for the surface area of a box:



Falling Objects

If you drop an object from an initial height (in feet) of h_0 , then the height of the object t seconds after dropping it can be calculated with the following formula:

$$h = -16t^2 + h_0$$

(Note: this formula assumes no air resistance)

Ex 2.

You base-jump off a 2000-foot-high cliff that is right next to the ocean. How far from the water are you 4 seconds later?