Section 2.6 Formulas and Problem Solving

# Objective 1: Using Formulas to Solve Problems

# An equation that describes a known relationship among quantities is called a formula. For example, if we know that someone traveled miles at a rate of miles per hour, we can use the formula to determine that they traveled for hours.

Substitute the given values into the formula and solve for the unknown variable.

a. ; , , ;

b. ; , , ;

The formula converts temperature from degrees Celsius to degrees Fahrenheit.

c. What is in degrees Fahrenheit?

d. What is in degrees Celsisu?

# Objective 2: Solving a Formula for One of Its Variables

It is sometimes useful to rearrange a formula to solve for a different variable. For example, the formula can be rearranged to solve for by dividing both sides by .

It can also be rearranged to solve for by dividing both sides by .

We can select which version of the formula to use depending on what quantity we are trying to find.

a. Rearrange the formula to solve for .

b. The formula for finding the volume of a cone is given by . Solve the formula for .

c. The formula for finding the perimeter of a rectangle is . Solve the formula for .

d. A rectangular enclosure is to be constructed using feet of fencing. If the width of the enclosure is feet, what is its length?