Section 2.5 An Introduction to Problem Solving

# Objective 1: Solving Direct Translation Problems

# In order to use an algebraic equation to solve a problem, we need to translate the situation presented into an equation.

Write an algebraic equation for the sentence. Then find the number.

a. Two less than three times a number is equal to two times the number plus four.

b. Three fourths of the sum of a number and five is equal to fifteen.

# Objective 2: Solving Problems Involving Relationships Among Unknown Quantities

# We will now examine a variety of problems that can be solved by writing and solving algebraic equations. When using an equation to solve a problem, it is important to interpret the solution within the context of the situation.

a. The measure of the third angle in an isosceles triangle is $58.5°$ more than the measure of either of the two equal angles. Find the measures of the angles of the triangle.

b. There were $475$ freshmen and sophomores at a student assembly. If there were $37$ more freshmen at the assembly than sophomores, how many freshmen were at the assembly?

c. The sum of three consecutive even integers is $246$. Find the three integers.