Lesson 3-1

Example 1 Write a Phrase as an Expression
Write the phrase *three points more than Sarah scored* as an algebraic expression.

Words	three points more than Sarah scored
Variable	Let p represent the number of points Sarah scored.
Expression	$p + 3$

Example 2 Write Sentences as Equations
Write the sentence as an algebraic equation.
Four less than a number is 24.

Words	Four less than a number is 24.
Variable	Let n represent a number.
Equation	$n - 4 = 24$

Example 3 Write Sentences as Equations
Write the sentence as an algebraic equation.
Four times the amount of Drew's allowance equals $27.

Words	Four times the amount of Drew's allowance equals $27.
Variable	Let a represent the amount of Drew's allowance.
Equation	$4a = 27$

Example 4 Write Sentences as Equations
WEATHER There were 43 snowy days last winter. This was 15 less than the number of snowy days during the winter the year before. Write an equation that models this situation.

Words	The number of snowy days last winter was 15 less than the number of snowy days during the winter the year before.
Variable	Let s represent the number of snowy days the year before.
Equation	$43 = s - 15$

Example 5 Standardized Test Practice

Which problem situation matches the equation $x + 3 = 17$?

A The temperature today is 3 degrees colder than yesterday. It is 17° today. Find yesterday's temperature.

B Kimberly is three years older than her sister Kelley. Kimberly is 17 years old. Find Kelley's age.

C Shannon spent $17 on CD's. Her friend Brenda spent $3 more. How much did Brenda spend?

D Bob purchased 3 used books at the book fair. David purchased 17 used books at the book fair. Find the total number of books purchased by Bob and David.

Read the Test Item

You need to find which problem situation matches the equation $x + 3 = 17$.

Solve the Test Item

The situation given in A involves subtraction, not addition.

The situation given in B yields the equation $x + 3 = 17$. This is the correct answer.

The situation given in C suggests adding 17 and 3. This is not represented by the given equation.

The situation given in D suggests adding 17 and 3. This is not represented by the given equation.

The solution is B.