

## Chapter 2 Equations in One Variable

### Lesson 2-3 Write Two-Step Equations

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**3** Translate the sentence into an equation.

*Six less than seven times a number is equal to  $-20$ .*

|                 |  |
|-----------------|--|
| <b>Words</b>    | Six less than seven times a number is equal to $-20$ |
| <b>Variable</b> | Let $x$ represent the number.                        |
| <b>Equation</b> | $7n - 6 = -20$                                       |

**5** **Financial Literacy** The cost for a certain music plan is \$9.99 per year plus \$0.25 per song you download. If you paid \$113.74 one year, find the number of songs you downloaded. Define a variable. Then write and solve an equation.

|                 |   |
|-----------------|---|
| <b>Words</b>    | \$9.99 plus \$0.25 per song equals \$113.74       |
| <b>Variable</b> | Let $s$ represent the number of songs downloaded. |
| <b>Equation</b> | $9.99 + 0.25s = 113.74$                           |

$$9.99 + 0.25s = 113.74$$

$$9.99 - 9.99 + 0.25s = 113.74 - 9.99$$

$$0.25s = 103.75$$

$$\frac{0.25s}{0.25} = \frac{103.75}{0.25}$$

$$s = 415$$

Write the equation.

Subtraction Property of Equality

Simplify.

Division Property of Equality

Simplify.

So, you downloaded 415 songs.