7. You want to buy a bouquet of yellow roses and baby's breath for $16. The baby's breath costs $3.50 per bunch, and the roses cost $2.50 each. You want one bunch of baby's breath and some roses for your bouquet. How many roses can you buy?

8. Suppose you walk at the rate of 210 ft/min. You need to walk 10,000 ft. How many more minutes will it take you to finish if you have already walked 550 ft?

9. Suppose you have shelled 6.5 lb of pecans, and you can shell pecans at a rate of 1.5 lb per hour. How many more hours will it take you to shell a total of 11 lb of pecans?

10. To mail a first class letter, the U.S. Postal Service charges $.34 for the first ounce and $.21 for each additional ounce. It costs $1.18 to mail your letter. How many ounces does your letter weigh?

11. Suppose you want to buy one pair of pants and several pairs of socks. The pants cost $24.95, and the socks are $5.95 per pair. How many pairs of socks can you buy if you have $50.00 to spend?

**Solve each equation. Check your answer.**

*On word problems you always define your variable + write the equation that represents the situation.*

7) $x$ = number of roses

$2.5x + 3.50 = 16$

$2.5x + 3.5 = 16$

$-3.5 \quad -3.5$

$\frac{2.5x}{2.5} = \frac{12.5}{2.5}$

$x = 5$ roses

9) $x$ = # of hours

$1.5x + 6.5 = 11$

$-6.5 \quad -6.5$

$\frac{1.5x}{1.5} = \frac{4.5}{1.5}$

$x = 3$ hours

11) $x$ = # of pairs of socks

$5.95x + 24.95 = 50$

$-24.95 \quad -24.95$

$100(5.95x = 25.05)$

$\frac{595x}{595} = \frac{2505}{595}$

$x = 4\frac{125}{595}$

$x = 4\frac{25}{119}$ mathematical answer

answer to the question

4 pairs of socks

$595 \overline{)2380}\ 4$

$2505 - 2380 = 125$

$5 \overline{)595}\ 119$

$-5$

$09$

$-9$

$45$

## EXAMPLE 3 Try It! Solve Mixture Problems

3. How many pounds of Arabica coffee should you mix with 5 pounds of Robusta coffee to make a coffee blend that costs $12.00 per pound?

**HABITS OF MIND**

**Generalize** How can you determine whether an equation has infinitely many or no solutions? MP.8

## EXAMPLE 4 Try It! Use Equations to Solve Problems

4. Cameron's friend tells him of another service that has a $15 joining fee but charges $0.80 per song. At what number of songs does this new service become a less expensive option to Cameron's current service?

x = # of songs where the 2 services are equal

current = new service

$.95x = .80x + 15$

$-.80x \quad -.80x$

$\frac{.15x}{.15} = \frac{15}{.15}$

$x = 100$ songs

at 101 songs the new service is less expensive