

**OBJECTIVE:** To write a linear equation to model a given situation.

**1a)** Bernie sells computers. Each day, he earns \$75 plus \$100 for each computer he sells. Let  $x$  represent the number of computers he sells. Write a linear equation to model this situation.

**b)** How much money will Bernie make if he sells 8 computers in a day?

**c)** How many computers must Bernie sell to earn \$1875 in a day?

**2a)** On January first, Devon has \$900 in his savings account. Every week, he spends \$12. Let  $x$  represent the number of weeks. Write a linear equation to model this situation.

**b)** How much money will Devon have after 13 weeks?

**c)** Assuming Devon doesn't add any money to his account and continues to spend \$12 each week, how many weeks will it him to spend all of his money?

**3a)** You call a company to trap the squirrels that are living under your deck. The company charges \$30 to drop off the traps and charges \$15 for each squirrel it traps. Let  $x$  represent the number of squirrels that are trapped. Write a linear equation to model this situation.

**b)** How much money will it cost you to catch 11 squirrels?

**4a)** In 12 minutes, a man burns 228 calories mountain biking. In 30 minutes, a man burns 570 calories. Let  $x$  represent the number of minutes. Write a linear equation to model this situation.

**b)** How many calories will a man burn after 20 minutes of exercise?

**5a)** After 6 minutes of exercise, a person's heart rate is 72 beats per minute. After 24 minutes of exercise, a person's heart rate is 108 beats per minute. Let  $x$  represent the number of minutes. Write a linear equation to model this situation.

**b)** When will a person's heart rate reach 130 beats per minute?

Jumbled Answers

380

744

35

195

875

75

18

$$y = 19x$$

$$y = 100x + 75$$

$$y = 15x + 30$$

$$y = 2x + 60$$

$$y = -12x + 900$$