## **Linear Word Problems**

- 1. Marco spent \$7 per day. Knowing Marco, he probably spent it on Lotto scratchers. After 5 days, he had \$8 left.
  - a. What two pieces of information are you given? \_\_\_\_\_ and \_\_\_\_?
  - b. Write an equation in slope-intercept form for the situation.
  - c. How much money did Marco have to start with?
  - d. How much money did he have after the 3<sup>rd</sup> day?
- Jenna works at a retail shop. She makes a flat amount of \$50, and \$3 for each item she sells.
  a. What two pieces of information are you given? \_\_\_\_\_\_ and \_\_\_\_\_\_?
  - b. Write an equation in slope-intercept form for the situation.
  - c. How much money does she make if she sells 29 items?
  - d. How many items does she have to sell if she wants to make \$100 in a day? (Give an appropriate answer)
- 3. Justin goes to a local arcade one weekend. He starts out with a certain number of tokens and spends them on games at a consistent rate. After 15 minutes he had 50 tokens, and after 40 minutes he didn't have any tokens left.
  - a. What two pieces of information are you given? \_\_\_\_\_ and \_\_\_\_\_?
  - b. Write an equation in slope-intercept form for the situation.
  - c. How many minutes would it take him to use 36 tokens?
  - d. Explain why the slope is negative for this situation.

- 4. A gym is offering a deal to new members. Customers can sign up by paying a registration fee of \$200 and a monthly fee of \$39.
  - a. Write an equation in slope-intercept form for the situation.
  - b. How much will this membership cost a member for an entire year?
- 5. Conner has an initial amount in his bank account. Conner only spends \$1,500 each month, and does not put any money into his account. After 8 months Conner has \$13,000.
  - a. Write an equation in slope-intercept form for the situation.

- b. How much money did he have in his account initially?
- c. How much time will it take for his bank account to reach \$2,000? (Give an appropriate answer)
- 6. While speaking on the phone to a friend in Oslo, Norway, you learned that the current temperature there was -23 Celsius (-23°C). After the phone conversation, you wanted to convert this temperature to Fahrenheit degrees, °F, but you could not find a reference with the correct formulas. You then remembered that the relationship between °F and °C is linear.
  - Using this and the knowledge that 32°F = 0 °C and 212 °F = 100 °C, find an equation that computes Fahrenheit temperature in terms of Celsius; an equation of the form F= (HINT: use Celsius as "x" and Fahrenheit as "y")

b. How cold was it in Oslo in °F?