1. Christopher had $125 in his savings account to buy a used car. He deposits $50 every week.

    a. Write an equation for the amount in his savings, where A is the amount in his savings and w is the week's deposits.

    b. What is the slope of the line?

    c. What does the slope represent in in this problem?

    d. How much money will Christopher have in his savings account after depositing for 13 weeks?

2. Jose the plumber charges $65 per hour to fix your plumbing. He also charges a service fee of $100.

    a. Write an equation to determine the charge of his services, C, after working h hours.

    b. What is y intercept?

    c. What does the y intercept represent in this problem?

    d. If Jose works at your house for 8hours how much will you owe him?

3. Kristina is running the freshman class fundraiser. They are selling key chains. They amount of money they make is computed using the function y = 2x – 100, where x represents the number of key chains sold.

    a. What does the y intercept mean in this problem?

    b. How much are they selling the key chains for?

    c. If they make $600 how many key chains did they sell?

4. It costs Corporal Motors $300,000 to outfit their new car line. The cost per car is $25,000.

    a. Write an equation to determine the amount of profit, p, earned from the sale of cars, c.

    b. How much profit will Corporal Motors make if they sell 15 cars?

5. Mr. Fries joins a CD club. He pays $15 for the membership and $6 for each CD that he buys.

    a. Write and equation that models the relationship between the cost Mrs. Fries pays, y, and the number of CD's he buys, x.

    b. If Mr. Fries pays the club $105, how many CD's did he buy?

6. Mrs. Canfield is draining her pool for the winter. There are 240 gallons in the pool and it is decreasing at a rate of 20 gallons per hour.

    a. Write an equation to represent the relationship between the amount of water in the pool, y, and the number of hours the pool has been draining, x.

    b. How much water is left in the pool after 4 hours?

7. Lance paints faces at kids' birthday parties to earn extra money. The equation m = 2.50f + 12 represents the relationship between the money he makes, m, and the number of faces he paints f.

    a. What does the slope represent in the equation?

    b. What does the y-intercept represent in the equation?

    c. Lance wants to buy a new video game that costs $119.50. How many faces does he need to paint?

8. Ms. Ricks is planning Thanksgiving dinner. The number of pounds of turkey she will buy depends on the number of people she invites to dinner.

    a. Write an equation to represent the relationship between the number of people invited, x, and the number of pounds of turkey needed, y.

# of people	Pounds of Turkey
12	9
20	15

    b. What is the y- intercept?

    c. What does the y intercept mean in the equation?

    d. If Ms. Ricks invites 16 people how many pounds of turkey will she need?

9. Ms. Willes is leaning to scuba dive. The equation D = 20L + 15 represents the depth she can dive in feet D, based on the number of lessons she has had, L.

    a. How deep can Ms. Willes dive after she takes 13 lessons?

    b. What does the y- intercept represent in this situation?

    c. What does the slope represent in this situation?

10. Laura lights a candle in her kitchen. The height of the candle is represented by the equation y = $-\frac{1}{2}$ x + 6, where x is the time in hours the candle has been burning and y is the height of the candle in inches.

    a. What was the height of the candle before Laura lit it?

    b. Why is the slope negative?

    c. How tall will the candle be after burning 2 hours?