NAME _____ DATE _____ PERIOD _____

4-1 Word Problem Practice

Writing Equations in Slope-Intercept Form

1. FUNDRAISING Yvonne and her friends held a bake sale to benefit a shelter for homeless people. The friends sold 22 cakes on the first day and 15 cakes on the second day of the bake sale. They collected $88 on the first day and $60 on the second day. Let x represent the number of cakes sold and y represent the amount of money made. Find the slope of the line that would pass through the points given.

2. JOBS Mr. Kimball receives a $3000 annual salary increase on the anniversary of his hiring if he receives a satisfactory performance review. His starting salary was $41,250. Write an equation to show k, Mr. Kimball's salary after t years at this company if his performance reviews are always satisfactory.

3. CENSUS The population of Laredo, Texas, was about 215,500 in 2007. It was about 123,000 in 1990. If we assume that the population growth is constant and t represents the number of years after 1990, write a linear equation with an integer slope to estimate p, Laredo's population for any year since 1990.

4. WATER Mr. Williams pays $40 a month for city water, no matter how many gallons of water he uses in a given month. Let x represent the number of gallons of water used per month. Let y represent the monthly cost of the city water in dollars. What is the equation of the line that represents this information? What is the slope of the line?

5. SHOE SIZES The table shows how women's shoe sizes in the United Kingdom compare to women's shoe sizes in the United States.

Women's Shoe Sizes							
U.K.	3	3.5	4	4.5	5	5.5	6
U.S.	5.5	6	6.5	7	7.5	8	8.5

Source: DanceSport UK

a. Write a linear equation to determine any U.S. size y if you are given the U.K. size x.

b. What are the slope and y-intercept of the line?

c. Is the y-intercept a valid data point for the given information?