4.6

Writing Equations in Slope Intercept Form (Day 2)

Translating Word Problems into Slope-Intercept Form

1) Suppose that the water level of a river is 34 feet and that it is increasing at a rate of 0.5 foot per day. Write an equation for the water level, y, after x days. In how many days will the water level be 42 feet?

2) Seth's father is thinking of buying his son a six-month movie pass for $40. With the pass, matinees cost $1.00. If matinees are normally $3.50 each, how many times must Seth attend in order for it to benefit his father to buy the pass?

3) For babysitting, Nicole charges a flat fee of $3, plus $5 per hour. Write an equation for the cost, *y,* after *x* hours of babysitting. What do you think the slope and the y-intercept represent? How much money will she make if she baby-sits 5 hours?

4) A canoe rental service charges a $20 transportation fee and $30 dollars an hour to rent a canoe. Write and graph an equation representing the cost, *y,* of renting a canoe for *x* hours. What is the cost of renting the canoe for 6 hours?

5) A 100-point test has *x* questions worth 2 points apiece and *y* questions worth 4 points apiece.

What is the total that is given? _____

What do the variables stand for:

x=_____**, y=** _____

a. Write an equation that describes all possible numbers of questions that may be on the test.

b. If you have 24 questions worth 4 points apiece, how many questions will be worth 2 points apiece?

Translating Word Problems into Standard Form

6) Louise has $36 in five-dollar bills and singles. How many of each type of bill does she have?

What is the total that is given? _____

What do the variables stand for:

x=_____, y= _____

a. Write an equation.

b. If Louise has 2 five-dollar bills, how many singles does she have?

Translating Word Problems into Standard Form

7) The Ramy family bought 4 sandwiches and 3 salads. They spent $24. Let *x* be the cost of a sandwich and *y* be the cost of a salad.

What is the total that is given? _____

What do the variables stand for:

x=_____**, y=** _____

a. Write an equation.

b. If each sandwich costs $3.75, how much did each salad cost?

27) A plant is 3 inches tall when you purchase it and grows 2 inches per month. Write an equation that represents the height y (in inches) of a plant that you purchased x months ago.

28) You go to the movies and pay $10 for a ticket to see the movie. Each bag of skittles cost $4. Write an equation, in slope-intercept form, that shows the total cost y (in dollars) of the ticket and x number of bags of skittles.

29) You are planning on participating in a walk-a-thon to raise money for charity. Your Dad offers to donate $20 for you to participate AND will pay an additional $5 for every mile you walk.

a) Write an equation that describes the situation.

b) Interpret the slope. (What does the slope mean in this problem?)

c) Interpret the y-intercept. (What does the y-intercept mean in this problem?)