**HW: Slope Word Problems**   **Name** _____

____ 1. Jamall wants to join the tennis club; there is a $60 startup fee and a $10 monthly fee every month. Write an equation in slope-intercept form modeling this situation where C is the total cost and t is the number of months spent with the tennis club.
    a.   C = 60t + 10   b. t = 60 + 10C   c. C = 60 + 10t   d. t = 60C + 10

____ 2. A conveyor belt runs between floors of a building as pictured below. Find the slope of the belt as a positive number.
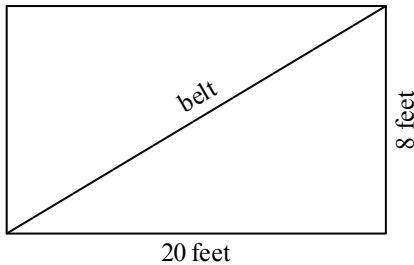
    a.   undefined   c. $\frac{2}{5}$

    b. $\frac{5}{2}$ d. 0

____ 3. A real estate sales agent receives a salary of $250 per week plus a commission of .02 of all sales. Write an equation that gives the weekly income y in terms of sales x.
    a.   y = 250 + .02x   b. y = 250x + .02   c. y = 250 + .02   d. y = 250x

____ 4. Using number 3 how much in sales must the realtor sell if they want to double their money for the week?

    a. $260   b. $12,500   c. $37, 500   d. $25,000

Beach Bike Rentals charges $5.00 plus $0.20 per mile to rent a bicycle.

____ 5. Write an equation for the total cost C of renting a bicycle and riding for m miles.
    a. $C = 5 + 0.2m$ c. $m = 5 + 0.2C$
    b. $C = 0.2 + 5m$ d. $C = 5 + 2m$

____ 6. What is the cost of renting a bike and riding 18 miles?
    a. $3.60   c. $8.60
    b. $41.00   d. $11.60

Write a linear equation in slope-intercept form to model the situation.

____ 7. A television repair shop charges $35 plus $20 per hour.
    a. $C = 20 + 35h$ c. $C = 25 + 30h$
    b. $h = 35 + 20C$ d. $C = 35 + 20h$

____ 8. An icicle is 12 inches long and melts at a rate of $\frac{1}{4}$ inch per hour.
    a. $L = 12 - \frac{1}{4}t$ c. $L = 12 - 4t$

    b. $L = \frac{1}{4} - 12t$ d. $t = 12 - \frac{1}{4}L$

Mr. Collins is constructing a fence around his property. He already has 25 sections up and plans to add 8 sections each Saturday until he is finished.

____ 9. Write an equation to find the total number of fence sections F standing after any number of Saturdays s.
    a. $F = 25 + 8s$ c. $F = 25 - 8s$
    b. $F = 8 + 25s$ d. $s = 25 + 8F$

_____ 10. Find the total number of fence sections standing after 15 Saturdays.
      a. 383 sections   c. 145 sections
      b. 125 sections   d. 105 sections

_____ 11. A balloon takes off from a location that is 158 ft above sea level. It rises 56 ft/min. Write an equation to model the balloon's elevation h as a function of time t.
      a. $t = 158h + 56$ b. $h = 56t + 158$ c. $h = 158t + 56$ d. $t = 56h + 158$
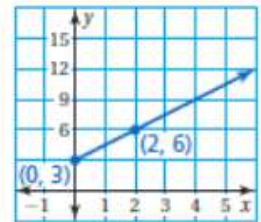
12. The graph shows the height y (in feet) of a flag x seconds after you start raising it up a flagpole.
    a. Find and interpret the slope. _____

    b. Write an equation of the line. _____

    c. What is the height of the flag after 9 seconds? _____

    d. How many seconds have you been raising the flag if you are at 18 feet? _____

14. A recreation department bought bottled water to sell at a fair. The graph shows the number y of bottles remaining after each hour x.

a. Find the slope and y-intercept. _____

b. Write an equation of the line. _____

c. Interpret the slope and the y-intercept. _____

d. The fair started at 10 a.m. when did the recreation department run out of bottled water?

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