Name: _____   MATH   Class: _____

UNIT 2 REVIEW SHEET

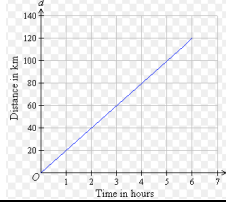|	
1) A dog walker charges $18 to walk a dog for 1 hour, $36 to walk a dog for 2 hours, and $54 to walk a dog for 3 hours. If the dog walker's total charge (in dollars) is graphed over time (in hours), what would be the slope of the graph?	2) The graph shows the total distance that a person drove over time (in hours). What is the difference in the distance when the person drove 5 hours, compared to 2 hours?

3) Sandra and Emil are both house painters, and each charges an hourly rate for a painting job. The equation y = 15x shows the total charge, y, in dollars for hiring Sandra to paint a house for x hours. The table below shows the same information for Emil. What conclusion can you make about their hourly rates?

Emil's Charges

| X	3	6	9	12
Y	45	90	135	180

4) Marco has a paper route. He is paid $20 each week and $0.15 for each paper he delivers. Write an equation that shows the relationship between the number of papers he delivers and his income for one week.

5) What is a direct proportion? Give three different examples of a direct proportion.

6) If a line passes through the two points below, the equation of the line is:
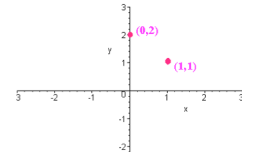
7) Find the equation of the line.
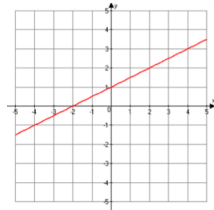
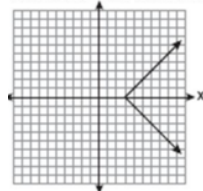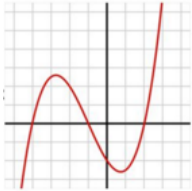8) Graph the equations
   a) $y = 3x - 2$
   b) $y = \frac{3}{2}x + 3$

9) If a line contains the points in the table below, the equation of the line is:

X	-2	0	4	6
Y	-5	-1	7	11

10) Fill in the function table for y = -4x + 4

X	-3	-2	-1	0	1
Y					

11) Determine if the graphs represent a function or relation:
    a)   b)

12) Determine which equation does not represent a linear function:
    a) $y = 5x - x + 3$
    b) $y = x^3 + 2$
    c) $y = 8x + 1$
    d) $y = \frac{1}{2}x + 9$

13) At summer camp, there is one counselor for every 8 campers. Determine whether there is a direct variation between the number of campers, y, and the number of counselors, x. If so, find the equation of direct variation.

14) Bill started a savings account in the beginning of January. He adds the same amount of money to the savings account each month. The table below shows the balance, y, in dollars, of the savings account at the end of each month, x. How much money did Bill start the savings account within the beginning of January?

Months	Feb	March	April	May
Balance ($)	460	575	690	805

15) Given the linear function $y = \frac{-1}{2}x + 5$, what is the missing output for the following inputs?

Input (x)	Output (y)
-8	
-2	
0	
6	

16) Mr. Sanders recorded the amount he spent on gas each month to see if it would be cheaper to take the train to work. According to the table, what was the rate of change between January and May?

Month	Jan	Feb	March	April	May
Dollars	60	77	96	63	60