Algebra 2 Name: _____
Mr. Doherty

Chapter 2 practice Test – (Be sure and show all work)

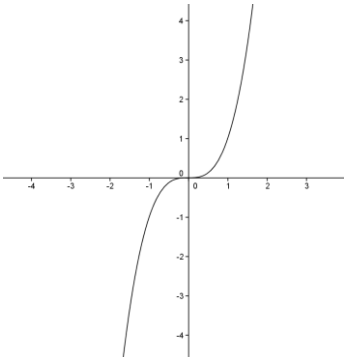
Numbers 7 and 8 would be calculator problems

1) **For the following parts, state which relations are functions and which are not. Be sure and explain your answer.**

a)

x	y
3	4
4	7
5	10
10	25

b).



c. (3, 2), (5, 6), (0,3), (3,2)

d.

x	y
3	4
3	7
6	10
12	25

2) State whether or not the following function is linear or not. Then evaluate f(3)

a) $f(x) = 3x - 7$ **b)** $f(x) = x^3 - x^2 + 2x + 4$

3) Find the equation of the line that goes through the points (-2, -6) and (6, 14)

4) Find the equation of the line that is perpendicular to your answer from question three and goes through the point (1, 1).

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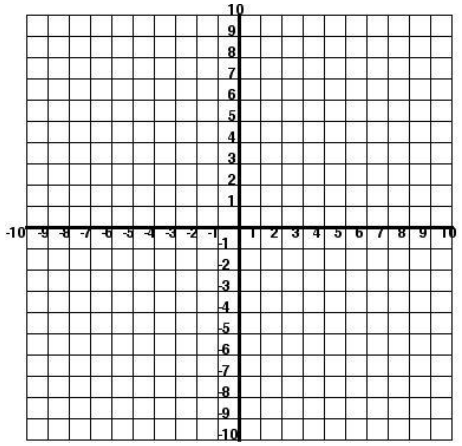
5) Find the equation of the line that is parallel to your answer from question three and goes through the point (1, 1).

6) Graph the equation $y = \frac{1}{2}x + 3$. Find the x and y intercepts and label them on the graph. Also state the slope and y-intercept.



7) When I worked on the farm the amount of money I was paid was <u>directly related</u> to the amount of hours that I worked. One week I worked for 25 hours and I was paid $206.25.

a) Find the constant of variation and form an equation, relating money to hours worked.

b) If I worked for 34 hours the next week how much money did I get paid?

8) The following table gives my bowling scores y on the first 5 weeks x of my bowling league.

a) Find the best-fitting line for the data.

b) Predict what I will bowl on the 21st week.

X (Week)	Y(Score)
1	120
2	115
3	132
4	135
5	140

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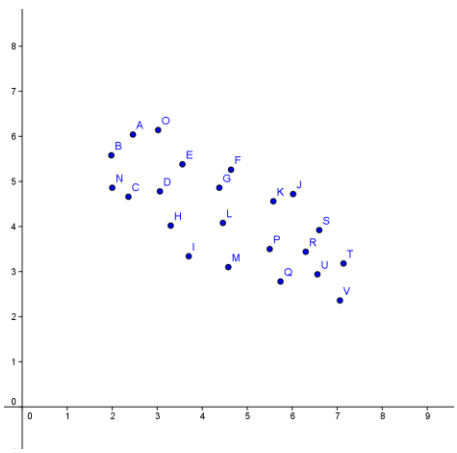
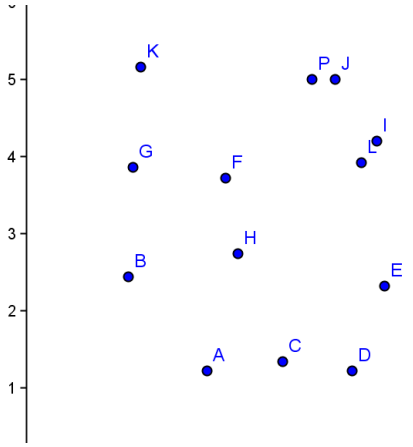
9) For each graph state whether the correlation appears to be negative, positive, or if there appears to be no correlations.

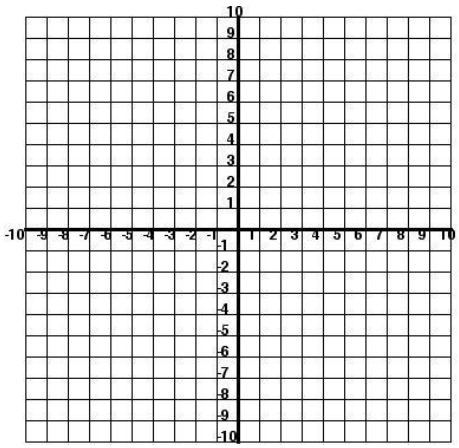
a)



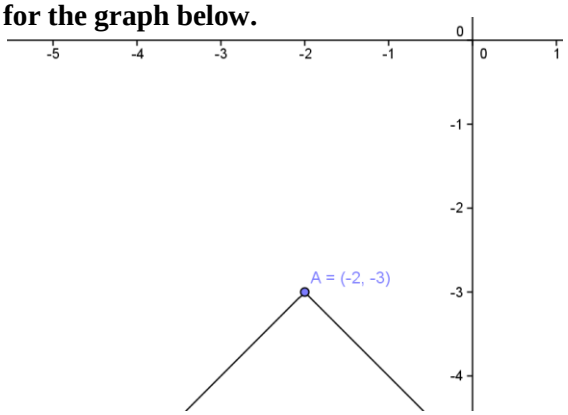
b)



10) Graph the equation $-4y + 3x > 2$ in the coordinate plane below.



11) Write an equation for the graph below.



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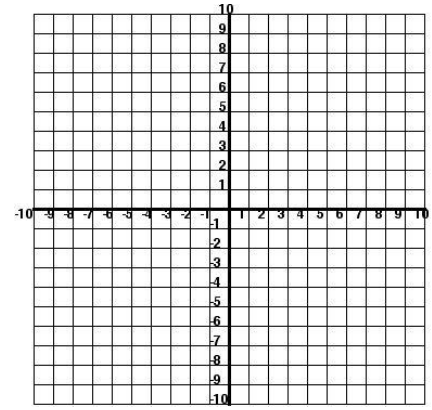
12) Graph the function $f(x)=2|x-1|-3$ below, and explain all of the changes that happen if the original graph is $g(x)=|x|$.



13) Graph the function $f(x)=-\frac{3}{4}|x+5|+2$ below, and explain all of the changes that happen if the original graph is $g(x)=|x|$.