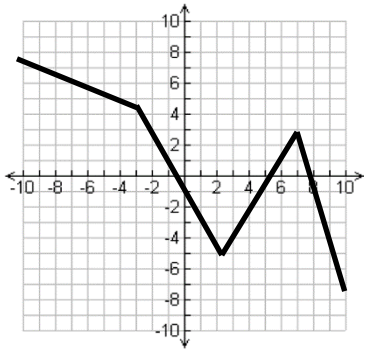
Name _____ Date _____

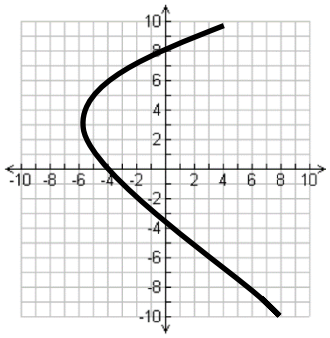
For this part of the review, make sure you can do the work <u>without</u> using a calculator.

1. If you are given an explicit notation, convert it to recursive. If you are given a recursive notation, convert it to explicit. **Show your work**.

   a) $a_n = a_{n-1} + 6;\ a_1 = -8$ b) $a_n = 3n - 12$

2. Determine whether each of the following is a function or a relation.

a) 

b) 

c) {(3, 4), (7, 8), (18, -7), (-4, 6), (6, -7), (-9, 3)}

d) {(5, -2), (5, -5), (5, 8), (5, 7), (5, 9), (5, -13)}

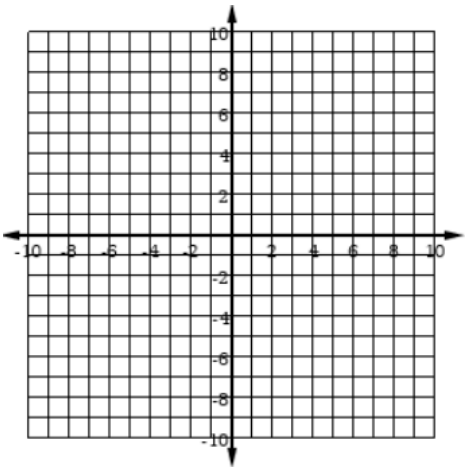
3. Given $f(x) = 2x^2 + 9x^3 - 8x^6$ find:

   a. standard form _____ d. constant _____

   b. degree _____ e. name by number of terms _____

   c. leading coefficient _____

4. Graph the following equation: $5x - 3y = -36$



Make sure you go back and review ALL material from 1.2 – 1.6 including notes, homework and DeltaMath

You can use a calculator for the rest of the review.

5. Find the explicit formula and the 87th term for the following sequence: 14.9, 8.6, 2.3, …

6. Dale has opened 142 new accounts as of week one. Starting with week two, he opens 12 new accounts each week. Write an explicit formula and a recursive formula for the situation, and find how many accounts he opened in week 52.

7. Use the function definitions shown below to find each of the requested values.

$\boxed{f(x) = -5x^2 + 8x - 3}$ $\boxed{g(x) = 14x + 7}$ $\boxed{h(x) = -5x^3}$

$h(x) \bullet f(x)$	$g(2x-5)$	$f(4)+g(3)+h(2)$	$4f(x)-2g(x)$

8. Write the equation _____

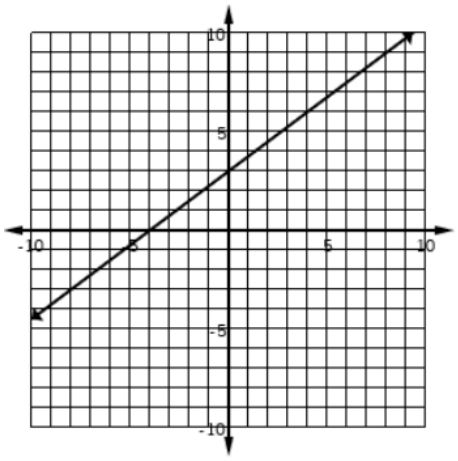
Domain _____ Range _____

x – intercept _____ y – intercept _____ (in function notation)

Interval of Increase _____ Decrease _____

Find $f(\_\_\_\_\_) = 6$ Rate of change over [-8, 4] _____

End behavior $x \to$ _____ $f(x) \to$ _____
$x \to$ _____ $f(x) \to$ _____



9. Simplify the following expressions. Show your work and put your answers in standard form

a. $(3x^2 + 4x - 7) - (8x^2 - 2x + 12)$

b. $3(-x^2 + 3x - 2) - 2(5x^2 - 2x + 11)$

10. Give <u>both</u> names for the following polynomials.

$9x^2 - 5x + 11$	$14x + 7$	$7x$	$4x - 5x^3 + 1 - x^2$	148

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