What you need to know and be able to do	Things to Remember	Problems	
1. Function Notation	Evaluate: substitute a number for x Evaluate Graphically: f(#) reads as when x=# then y =? f(x)= # reads as when y = # then x = ?	$f(x) = x^2 + 3x - 5$ $g(x) = 2x^2 - x + 2$ $h(x) = 3x^3$ a. f(2) b. g(-1) c. h(3) Answer the following equations based on the graph below: A) f(-1): B) f(0): C) f(x) = 4 so x = _____ D) f(x) = -4 so x = _____	
2. Arithmetic Sequences	Adding or Subtracting to get to the next term $a_n = a_{n-1} + d$ $a_n = a_1 + d(n-1)$	a. Write the rule for the following sequence and find the 50th term: 3, 6, 9, 12, 15, 18	c. Determine the sequence is arithmetic. i. 16, 8, 0, -8, . . . ii. 16, 8, 4, 2, 1, . . . iii. 2, 4, 6, 8, . . .

| | | b.

Write the first 4 term in the sequence:
$a_n = -2n + 7$ | iiii. 2, 4, 8, 16, . . .

d. write an explicit formula for the table:

x	1	2	3	4
y	2	5	8	11	
---	---	---	---
3. Graph linear functions (lines)	Write equation in slope intercept form by solving for y
Y = mx + b

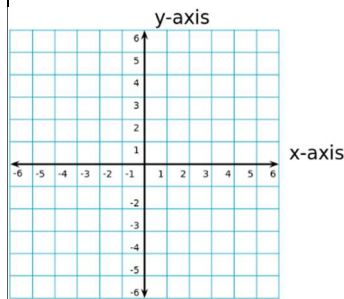b is y-intercept and m is slope (rise over run)

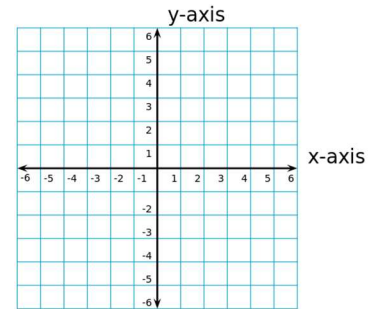vertical lines:
x = a number and undefined slope
horizontal lines:
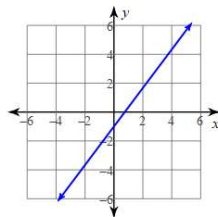y = a number and has a slope of zero | a. graph 3x – y = -2
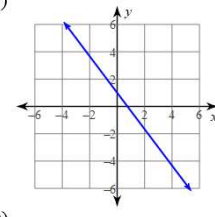

b. graph y = -2/3 x -1

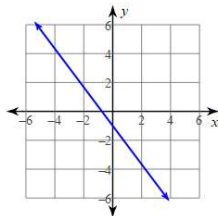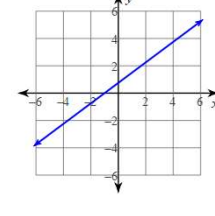c. Determine which graph represents the linear equation.
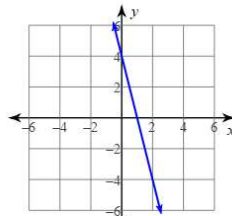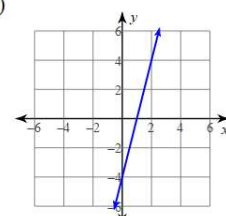$4x + 3y = 3$

A)   C)

B)   D)

d. Determine which graph represents the linear equation.
$x - 4y = -4$

A)   C)
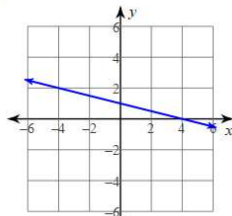
B)   D) |
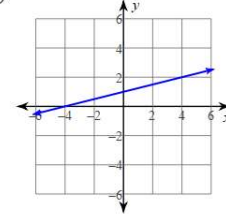
4. Linear Characteristics	Characteristics that are x values: Domain x intercept	
	Characteristics that are y values: Range y intercept End Behavior	
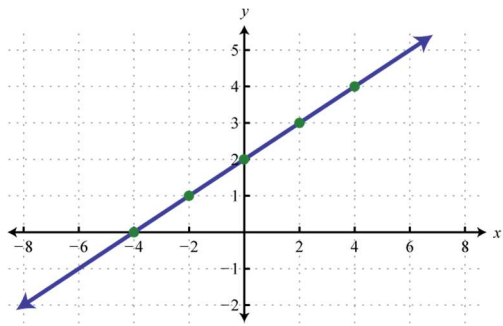
Eqn of line: _____

Domain: _____   Range: _____

X intercept: _____   Y intercept: _____

f(2) = _____   If f(x) = 5, then x = _____

End behavior:
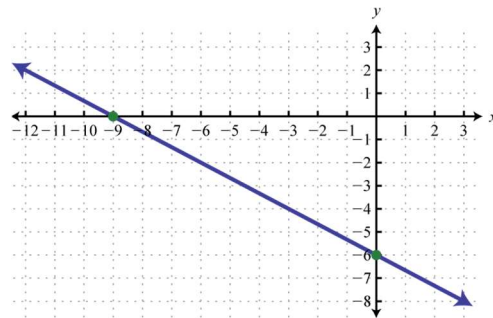
As x → ∞ f(x) → _____

As x → - ∞ f(x) → _____

Eqn of line: _____

Domain: _____   Range: _____

X intercept: _____   Y intercept: _____

f(-3) = _____   If f(x) = -2, then x = _____

End behavior:

As x → ∞ f(x) → _____

As x → - ∞ f(x) → _____