Project 9: Graphing

For each given set of information, provide the other version of the graph and the equation of the line:

	Given graph or point:	Draw the other version of the	Write the equation of the		
		graph:	line:		
1)	X X	-5 -4 -3 -2 -1 0 1 2 3 4 5			
2)					
	-5 -4 -3 -2 -1 0 1 2 3 4 5 X	x x			
3)	x x	-5 -4 -3 -2 -1 0 1 2 3 4 5			
4)					
	$\stackrel{\leftarrow}{\overset{-5}{\rightarrow}} \stackrel{-4}{\xrightarrow{-3}} \stackrel{-2}{\xrightarrow{-2}} \stackrel{-1}{\xrightarrow{-1}} \stackrel{0}{\xrightarrow{1}} \stackrel{1}{\xrightarrow{2}} \stackrel{1}{\xrightarrow{3}} \stackrel{1}{\xrightarrow{5}} \stackrel{1}{\xrightarrow{5}}$	***			
5)	Graph the point $(-2, -3)$. Consider the vertical line that passes through this point:	x x x x x x x x x x x x x x x x x x x			
6)	Graph the point $(-2, -3)$. Consider the horizontal line that passes through this point:	X X			
7)	Graph the point $(4, -1)$. Consider the horizontal line that passes through this point:	x			
8)	Graph the point $(4, -1)$. Consider the vertical line that passes through this point:	x x x x x x x x x x x x x x x x x x x			

For each of the following lines, describe the slope:

		Г	T	T	
	Graph	Slope positive or	Slope has	Pick two	Calculate the slope
		negative (or zero,	magnitude less	points on	from these two
		or undefined)?	than one or	the line:	points by
			greater than one?		counting:
9)	× × ×				
10)	× × × × × × × × × × × × × × × × × × ×				
11)	***				
12)	× × ×				
13)	*				
14)	**				

For each of the following pairs of points, first graph the two points, then use the two points to determine information about the slope and the y-intercept, and finally write the equation of the line:

15)	Points: (-1,2),	Graph the two points:	Slope positive or negative (or zero, or undefined)?	Slope has magnitude less than one or greater than one?	Pick two points on the line:	Calculate the slope from these two points:	Identify the y-intercept:	Write the equation for the line in slope-intercept form:
	(-1,-4)	x x x						
16)	(-2,3), (-3,-1)	× × ×						
17)	(-4, 2), (-1, 4)	× × ×						
18)	(2,3), (-2,5)	x > >						
19)	(2,3), (-1,3)	× × ×						
20)	(2,1), (1,4)	× × ×						

For each of the following graphs, identify the slope and the intercept, then write the equation in slope-intercept form:

	Graph	Slope positive or negative (or zero, or undefined)?	Slope has magnitude less than one or greater than one?	Pick two points on the line:	Calculate the slope from these two points:	Identify the <i>y</i> - intercept:	Write the equation for the line in slope-intercept form:
21)	× × × × × × × × × × × × × × × × × × ×						
22)							
23)	× ×						
24)	*						
25)	*						
26)	× ×						

For each of the following graphs, identify the slope and the intercept, and then graph the line:

27)	Equation of the line:	Slope positive or negative (or zero, or undefined)?	Slope has magnitude less than one or greater than one?	Slope:	y-intercept:	Graph
28)	y = -2x + 1					***
29)	<i>y</i> = 3					× × ×
30)	$y = \frac{1}{3}x - 3$					x x x x x x x x x x x x x x x x x x x
31)	$y = 2x - \frac{1}{2}$					× × ×
32)	$y = -\frac{2}{3}x + 2$					× × ×
33)	x = -2					***

For each of the following graphs, identify the two intercepts, and then graph the line, and then use that graph to find the slope:

34)	Equation of the line:	x- intercept:	y- intercept:	Graph	Slope positive or negative (or zero, or undefined)?	Slope has magnitude less than one or greater than one?	Slope:
35)	5x - 2y = 10			X X			
36)	$ \begin{aligned} -2x + 3y \\ &= -6 \end{aligned} $			x x			
37)	4x + 3y $= -12$			x >			
38)	2x + 7y = 14			x x x			
39)	-3x + 5y $= 15$			x > >			