Ordered Pairs in Tables

Each of the equations that were graphed are in the form:

$$y = mx + b$$

4. Fill in the values of **m** and **b** in column #1 and #2.
5. Look at the graphs of each line and fill in columns #3 and #4.

   The ***x-intercept*** is defined as the place where a line crosses the *x*-axis.
   The ***y-intercept*** is defined as the place where a line crosses the *y*-axis.

6. Find the slope of each of the lines which you have plotted using the $\frac{rise}{run}$ method. It may be helpful to actually sketch a *rise* and a *run* onto your graphs for each of the lines. Record the slopes in column #5.

Slope   y-int   **COLUMN # :**

		RELATION	1 m	2 b	3 x - intercept	4 y - intercept	5 slope
Graph #1	a	$y = 2x + 4$	2	4	(-2, 0)	(0, 4)	2
	b	$y = 2x + 2$	2	2	(-1, 0)	(0, 2)	2
	c	$y = 2x$	2	0	(0, 0)	(0, 0)	2
	d	$y = 2x - 4$	2	-4	(2, 0)	(0, -4)	2
Graph #2	a	$y = -2x + 4$	-2	4	(2, 0)	(0, 4)	-2
	b	$y = -2x + 1$	-2	1	(-½, 0)	(0, 1)	-2
	c	$y = -2x - 1$	-2	-1	(½, 0)	(0, -1)	-2
	d	$y = -2x - 5$	-2	-5	(-⁵⁄₂, 0)	(0, -5)	-2
Graph #3	a	$y = 4x - 2$	4	-2	(½, 0)	(0, -2)	4
	b	$y = 2x - 2$	2	-2	(1, 0)	(0, -2)	2
	c	$y = x - 2$	1	-2	(2, 0)	(0, -2)	1
	d	$y = \frac{1}{2}x - 2$	0.5	-2	(4, 0)	(0, -2)	0.5
Graph #4	a	$y = -\frac{1}{2}x + 3$	-0.5	3	(6, 0)	(0, 3)	-0.5
	b	$y = -x + 3$	-1	3	(3, 0)	(0, 3)	-1
	c	$y = -2x + 3$	-2	3	(1.5, 0)	(0, 3)	-2
	d	$y = -4x + 3$	-4	3	(0.75, 0)	(0, 3)	-4

7. Which column of the Table of Results is identical to column #1? __5__

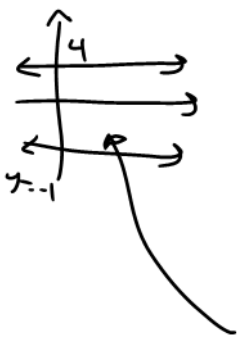   What conclusions can you make from this observation about the meaning of **m** ?

   ___m is the slope.___

8. Which column of the Table of Results is identical to column #2? __4__

   What conclusions can you make from this observation about the meaning of **b** ?

   ___b is the y-int___

9. Fill in the chart.

	Equation	m	b	Slope	y-intercept
a	$y = 2x + 4$	2	4	2	(0,4)
b	$y = 7x - 2$	7	-2	7	(0,-2)
c	$y = -3x - 1$	-3	-1	-3	(0,-1)
d	$y = x - 3$	1	-3	1	(0,-3)
e	$y = -x + 8$	-1	8	-1	(0,8)
f	$y = 4x$	4	0	4	(0,0)
g	$y = 4$	0	4	0	(0,4)
h	$y = -x$	-1	0	-1	(0,0)
i	$y = -1$	0	-1	0	(0,-1)
j	$y = x$	1	0	1	(0,0)