

Tables of Values

GRAPH #1:

(A)

(B)

(C)

(D)

Equations:

a) $y = 2x + 4$

x	y
-1	2
0	4
1	6
2	8

b) $y = 2x + 2$

x	y
-1	0
0	2
1	4
2	6

c) $y = 2x$

x	y
-1	-2
0	0
1	2
2	4

d) $y = 2x - 4$

x	y
-1	-6
0	-4
1	-2
2	0

GRAPH #2:

Equations:

a) $y = -2x + 4$

x	y
-1	6
0	4
1	2
2	0

b) $y = -2x + 1$

x	y
-1	3
0	1
1	-1
2	-3

c) $y = -2x - 1$

x	y
-1	1
0	-1
1	-3
2	-5

d) $y = -2x - 5$

x	y
-1	-3
0	-5
1	-7
2	-9

GRAPH #3:

Equations:

a) $y = 4x - 2$

x	y
-1	-6
0	-2
1	2
2	6

b) $y = 2x - 2$

x	y
-1	-4
0	-2
1	0
2	2

c) $y = x - 2$

x	y
-1	-3
0	-2
1	-1
2	0

d) $y = \frac{1}{2}x - 2$

x	y
-1	-2.5
0	-2
1	-1.5
2	-1

GRAPH #4:

Equations:

a) $y = -\frac{1}{2}x + 3$

x	y
-1	3.5
0	3
1	2.5
2	2

b) $y = -x + 3$

x	y
-1	4
0	3
1	2
2	1

c) $y = -2x + 3$

x	y
-1	5
0	3
1	1
2	-1

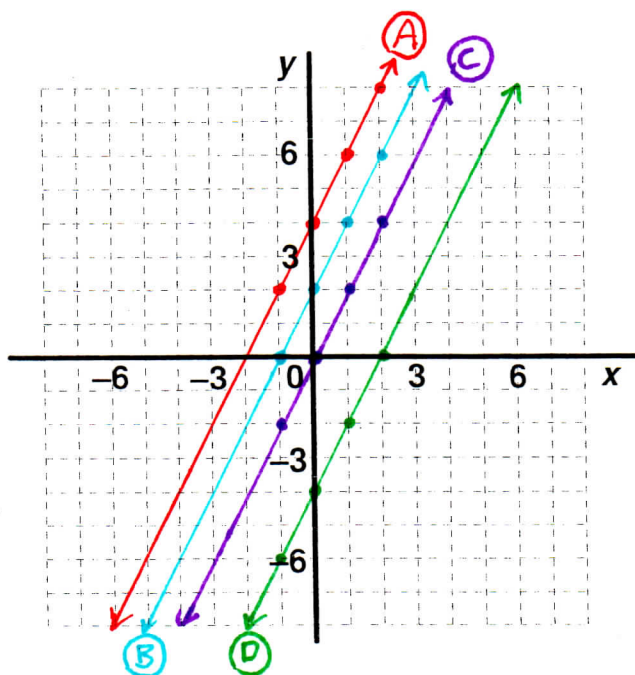
d) $y = -4x + 3$

x	y
-1	7
0	3
1	-1
2	-5

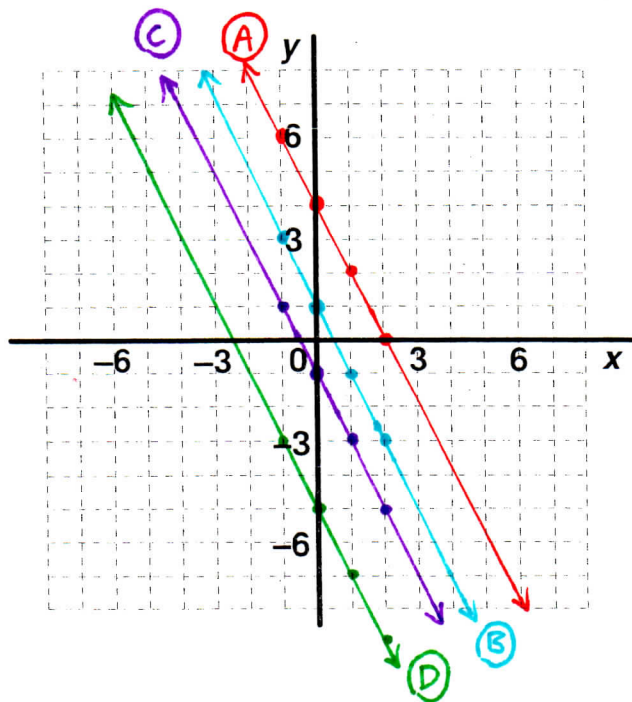
Graphs

1. Complete the Tables of Values for each equation.
2. Plot all 4 points from the Table of Values on the Graphs sheet, draw a line through these 4 points, extending the line edge-to-edge on the graph.
3. Label the line you have just graphed with its letter (a , b , c , or d)

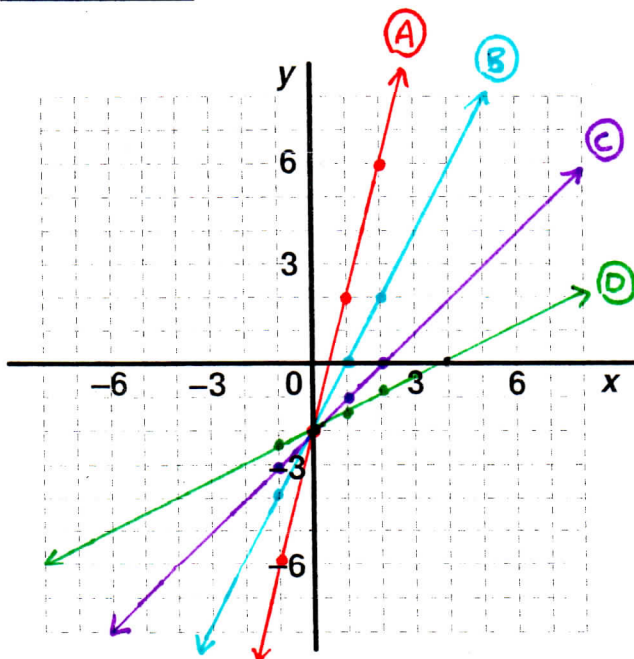
GRAPH #1:



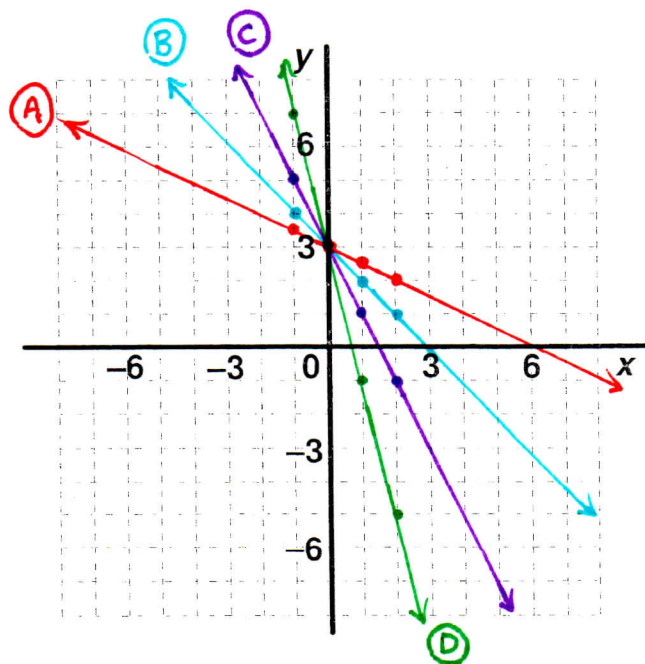
GRAPH #2:



GRAPH #3:



GRAPH #4:



Date: _____

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

$$y = mx + b$$

$$x = \frac{-b}{m}$$

x-intercept

$$y = b$$

y-intercept

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 $\frac{\text{rise}}{\text{run}}$ 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.

RELATION		COLUMN # :					
		1	2	3	4	5	
		m	b	x-intercept	y-intercept	slope	
Graph #1	a	$y = 2x + 4$	2	4	-2	4	2
	b	$y = 2x + 2$	2	2	-1	2	2
	c	$y = 2x$	2	0	0	0	2
	d	$y = 2x - 4$	2	-4	2	-4	2
Graph #2	a	$y = -2x + 4$	-2	4	2	4	-2
	b	$y = -2x + 1$	-2	1	0.5	1	-2
	c	$y = -2x - 1$	-2	-1	-0.5	-1	-2
	d	$y = -2x - 5$	-2	-5	-2.5	-5	-2
Graph #3	a	$y = 4x - 2$	4	-2	0.5	-2	4
	b	$y = 2x - 2$	2	-2	1	-2	2
	c	$y = x - 2$	1	-2	2	-2	1
	d	$y = \frac{1}{2}x - 2$	$\frac{1}{2}$	-2	4	-2	$\frac{1}{2}$
Graph #4	a	$y = -\frac{1}{2}x + 3$	$-\frac{1}{2}$	3	6	3	$-\frac{1}{2}$
	b	$y = -x + 3$	-1	3	3	3	-1
	c	$y = -2x + 3$	-2	3	1.5	3	-2
	d	$y = -4x + 3$	-4	3	0.75	3	-4

Date: _____

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 gives the y -intercept

9. Fill in the chart.

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