

Graphing Lines and Comparing Slopes

In this activity, we're going to graph some lines and compare their slopes. In the lines below, the x-values are given to you, so plug these values in to get your y-values. Then graph each one, extending it as far as possible, and label it accordingly.

1) $y = x$

x	y
-2	
-1	
0	
1	
2	

2) $y = 2x$

x	y
-2	
-1	
0	
1	
2	

3) $y = 5x$

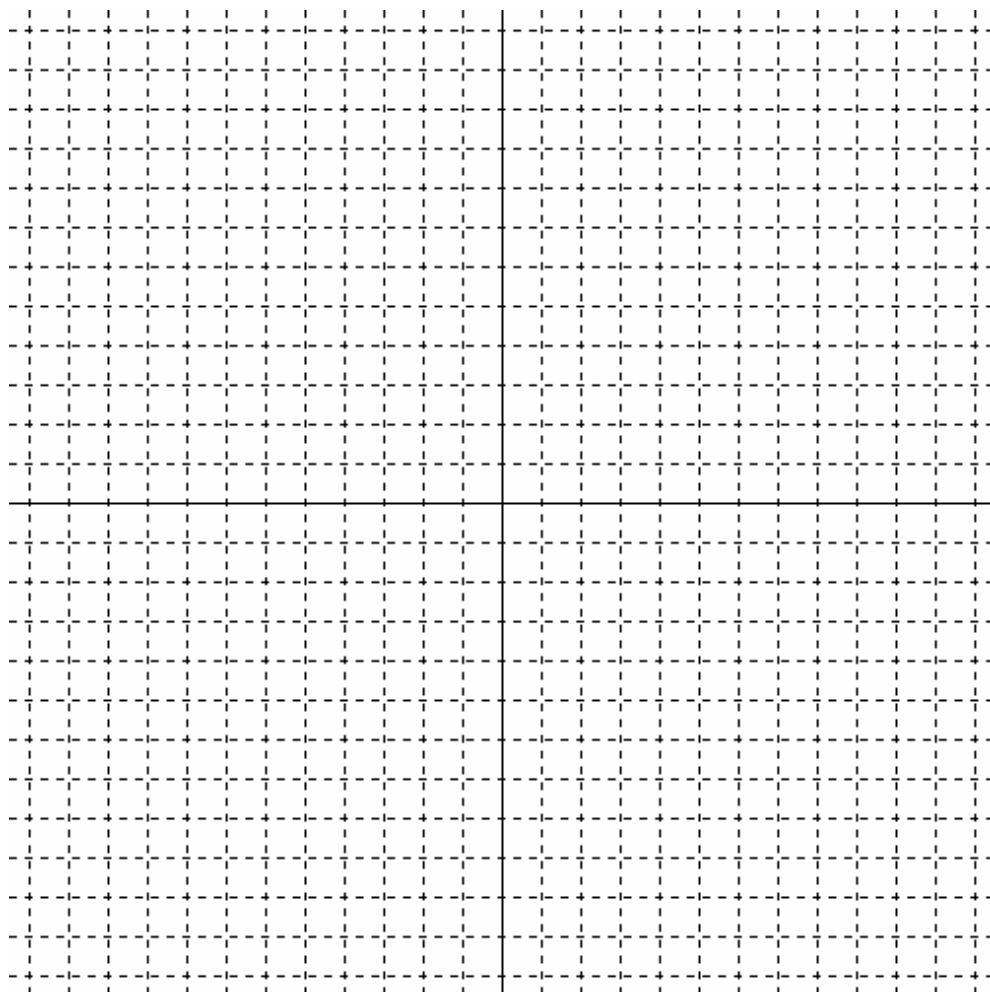
x	y
-2	
-1	
0	
1	
2	

4) $y = 10x$

x	y
-1	
0	
1	

5) $y = \frac{1}{2}x$

x	y
-4	
-2	
0	
2	
4	



Now graph the following on the grid below and label accordingly.

6) $y = -x$

x	y
-2	
-1	
0	
1	
2	

7) $y = -2x$

x	y
-2	
-1	
0	
1	
2	

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

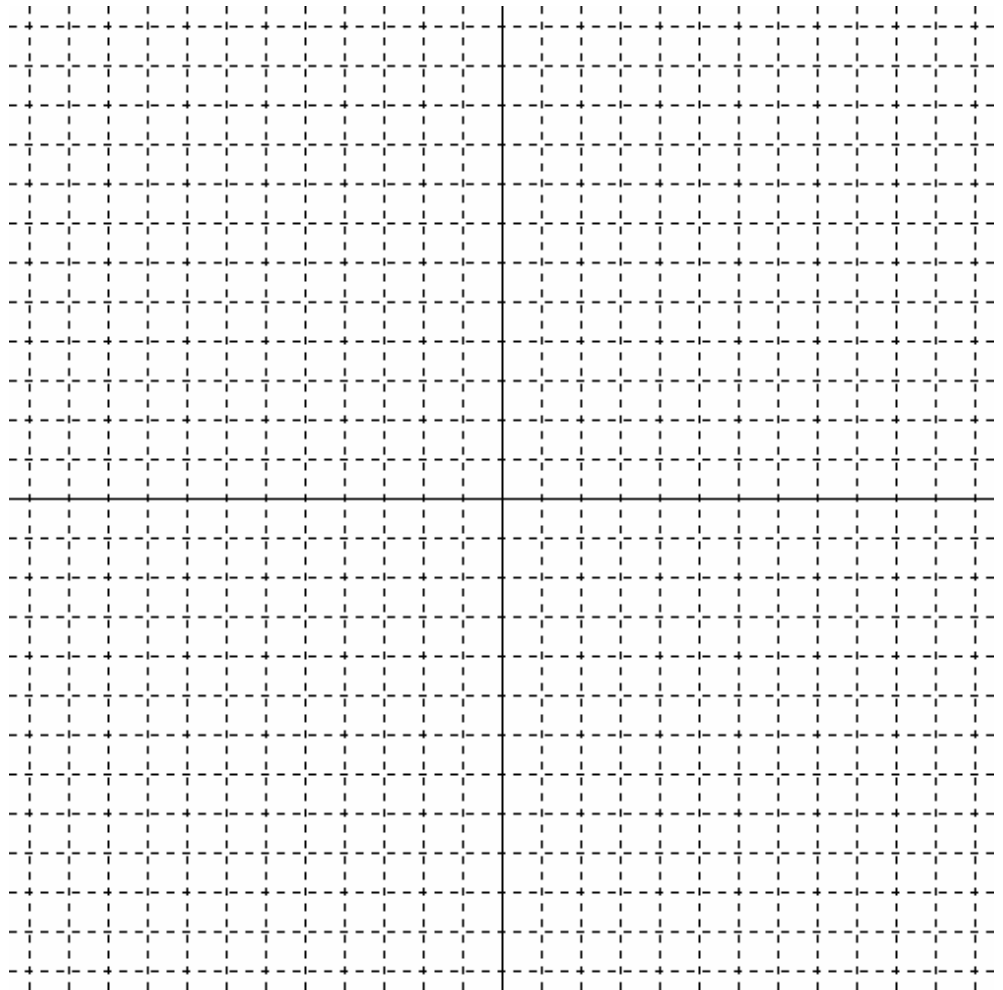
x	y
-4	
-2	
0	
2	
4	

9) $y = -5x$

x	y
-2	
-1	
0	
1	
2	

10) $y = -10x$

x	y
-1	
0	
1	



Answer the following questions or fill in the blanks based on your graphs.

- 1) A positive slope means the line is going _____ (Uphill or downhill)
- 2) A negative slope means the line is going _____ (Uphill or downhill)
- 3) The closer the slope is to zero, the _____ the line is. (Steeper or flatter)
- 4) The further the slope is away from zero, the _____ the line is. (Steeper or flatter)
- 5) What is the y-intercept of all of these lines? _____
- 6) What is the x-intercept of all of these lines? _____