

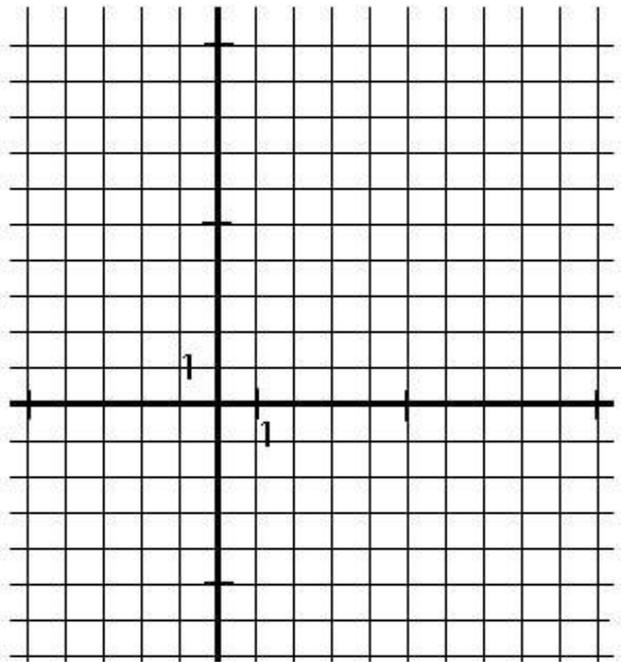
Relationship between x and y

NAME:

1. Complete the table below for the relationship $y = -2x + 5$.

x	$y = -2x + 5$
-3	
-2	
-1	
0	
1	
2	
3	

2. Plot and connect the points with a straight edge to draw the graph of $y = -2x + 5$. Notice the scale of the axes is labeled, one unit per tick mark on both axes.



We can think of this graph as the picture of the relationship between x and y .

3. Now consider the equation $y = -2x + 5$. Describe the relationship between x and y **in words**. In other words, what do we do to an x -value to make a y -value? (For example, the equation $y = 3x - 4$ can be described as “multiply the x -value by 3 and subtract 4 to get the y -value”.)

Notice every point on the graph, not only those in the table but also every point in between, follows this relationship.

4. Now find the x and y intercepts of the relationship $y = -2x + 5$ by the method shown in class. Show your work. Do your values match the graph?

5. Explain why we put 0 in for x to find the y -intercept.