

**Very Important Concept #1:**

Each input and output in a function table creates a coordinate point. This coordinate point can be graphed on the coordinate plane, creating a distinct shape.

**Very Important Concept #2**

Two types of functions:

1. Linear function – \_\_\_\_\_

2. Non-linear function – \_\_\_\_\_

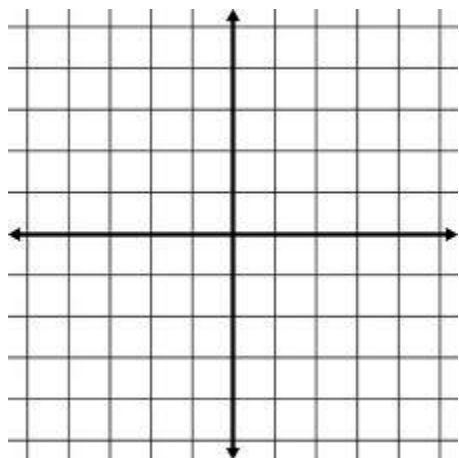
**Examples:**

1. Complete the function table and graph the function.  $y = x - 2$

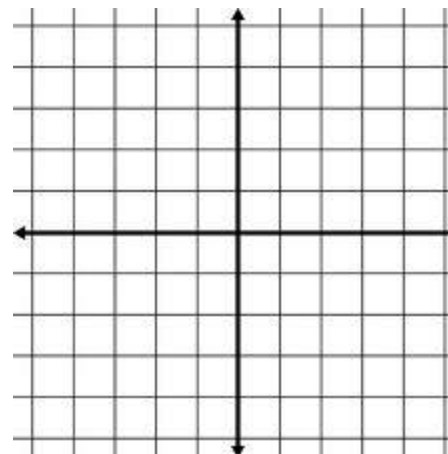
Input	Rule	Output	(input,output)
x	$x - 2$	y	(x,y)
-2			
-1			
0			
1			
2			

2. Complete the function table and graph the function.  $y = x^2$

Input	Rule	Output	(input,output)
x	$x^2$	y	(x, y)
-2			
-1			
0			
1			
2			



Is it linear or non-linear?



Is it linear or non-linear?

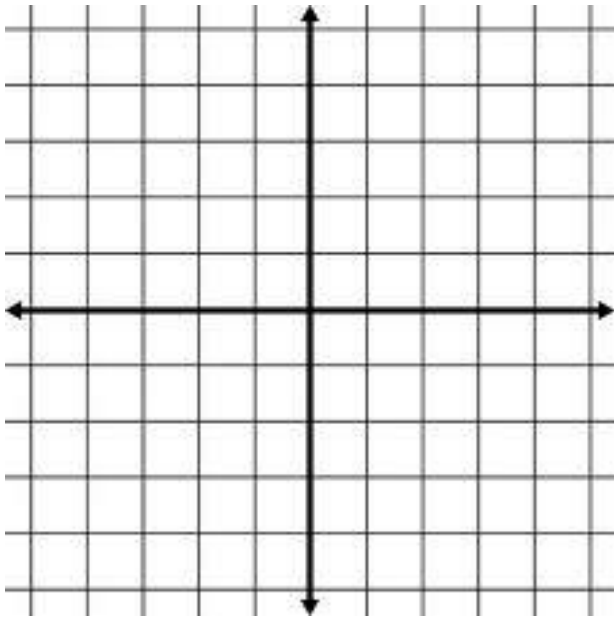
## U9-6 Graphing Functions

3. Complete the function table and graph the function.  $y = |x|$

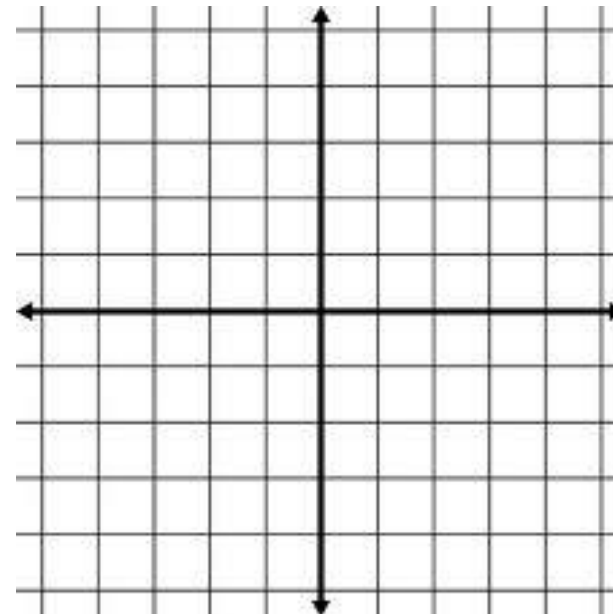
Input	Rule	Output	(input,output)
x	$ x $	y	(x,y)
-2			
-1			
0			
1			
2			

4. Create a table and graph the function  $y = 3x - 1$

x	$3x - 1$	y	(x, y)
-2			
-1			
0			
1			
2			



Is it linear or non-linear?

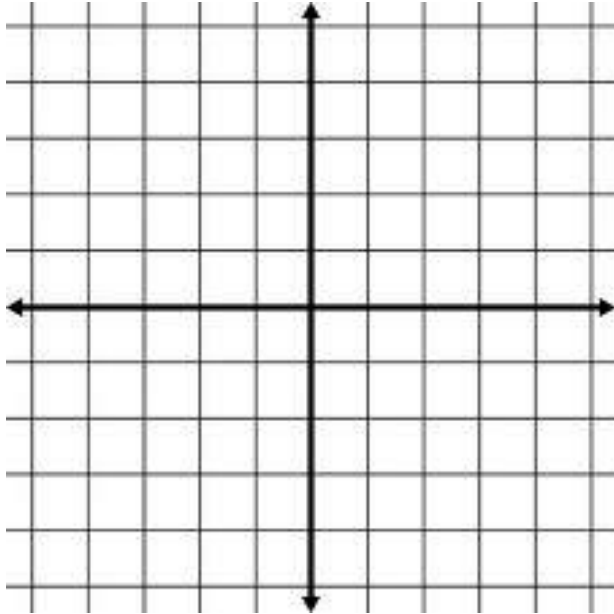


Is it linear or non-linear?

## U9-6 Graphing Functions

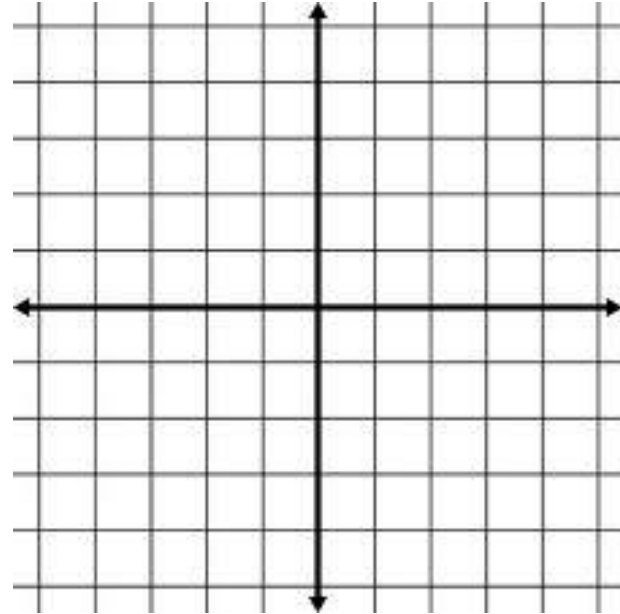
5. Create a table and graph the function  $y = x^2 - 3$

x	$x^2 - 3$	y	(x, y)



Is it linear or non-linear?

6. Create a table and graph the function  $y = |2x| + 1$

Is it linear or non-linear?

Summary Questions:

Why do all of these graphs represent functions?

What types of equations would not represent functions?