

Complete the table of values by entering the function into the Graphing Calculator and looking at the TABLE. Can you explain why we are looking at the y-value this time?

Sketch each function. Describe the transformation.

$$y = x^2$$

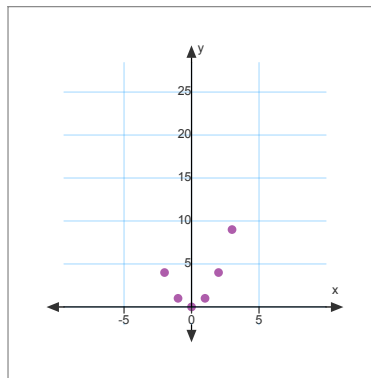
X	Y
-2	•
-1	•
0	•
1	•
2	•
3	•

$$y = 3x^2$$

X	Y
-2	•
-1	•
0	•
1	•
2	•
3	•

$$y = \frac{1}{3}x^2$$

X	Y
-2	•
-1	•
0	•
1	•
2	•
3	•



Complete the table of values by entering the function into the Graphing Calculator and looking at the TABLE. Can you explain why we are looking at the x-value this time?

Sketch each function. Describe the transformation.

$$y = x^2$$

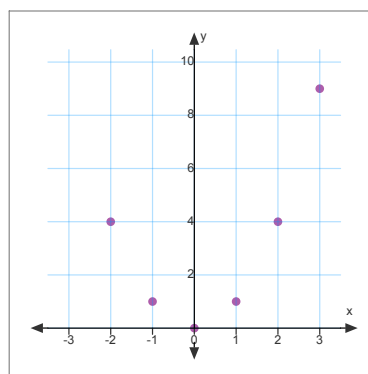
X	Y
-2	4
-1	1
0	0
1	1
2	4
3	9

$$y = (3x)^2$$

X	Y
•	4
•	1
•	0
•	1
•	4
•	9

$$y = \left(\frac{1}{3}x\right)^2$$

X	Y
•	4
•	1
•	0
•	1
•	4
•	9



Stretches and Compressions

Stretch	Mathematical Form	Effect on the Graph
Vertical	$y = af(x)$	
	$y = \frac{1}{a}f(x)$	
Horizontal	$y = f(x)$	
	$y = f\left(\frac{1}{a}x\right)$	

Horizontal and Vertical Stretches

Apply the transformation $2f(3x)$ to the function below.

Mapping for image points $(x,y) \rightarrow$

x	y	New (x,y)
0	0	
1	2	
3	2	
6	4	
9	0	

