

Name: \_\_\_\_\_

Warm up

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What Do I Look Like?

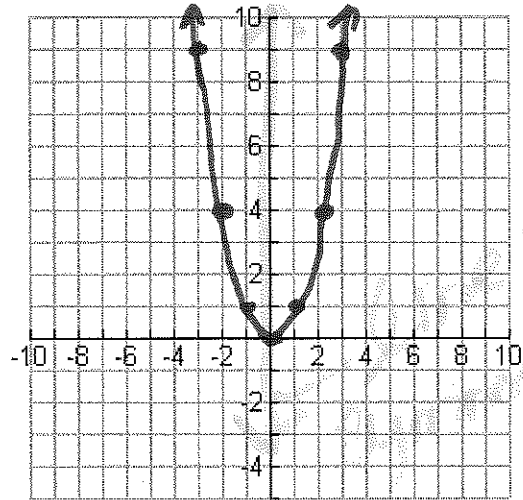
Quadratic Parent

Complete the table below.

$(-3)^2$

x	$y = x^2$	(x, y)
-3	9	(-3, 9)
-2	4	(-2, 4)
-1	1	(-1, 1)
0	0	(0, 0)
1	1	(1, 1)
2	4	(2, 4)
3	9	(3, 9)

Graph the function  $y = x^2$  on the graph below using the table to the left.



3. Describe the graph.

Looks like a 'U'; an arch  
- Same y-value on each side of y-axis

4. Describe the symmetry of the graph.

When you fold the shape  
it's identical; line of symmetry  
is y-axis

5. Why aren't any y-values negative?

Because the x-value was squared  
pos x pos = pos  
neg x neg = pos

This graph is called a "parabola". All quadratic functions have a shape similar to this. The focus of the next unit will be on quadratic functions and their graphs.

File this sheet as an example in your notes.