

**SM 2**

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

**1.4 Parent Graphs and Transformations**

**For each function, identify the parent graph ( $y = \sqrt{x}$ ,  $y = x^2$ , or  $y = |x|$ ), then list the transformation needed to get from the parent graph to the final graph. Make sure to list the transformations in the order in which they should be applied.**

1.  $y = -|x|$

2.  $y = \sqrt{x} + 3$

3.  $y = (x - 4)^2$

Parent: \_\_\_\_\_

Parent: \_\_\_\_\_

Parent: \_\_\_\_\_

Transformation:

Transformation:

Transformation:

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

5.  $y = |x + 1|$

6.  $y = 5\sqrt{x}$

Parent: \_\_\_\_\_

Parent: \_\_\_\_\_

Parent: \_\_\_\_\_

Transformation:

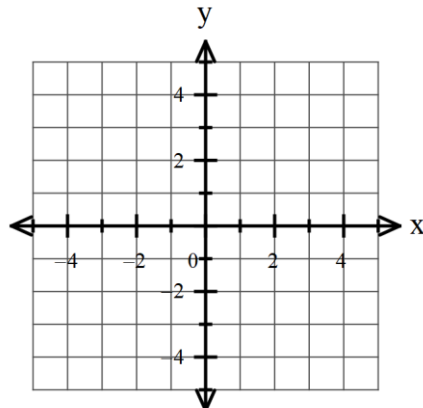
Transformation:

Transformation:

**Given the parent equation, fill in the parent table. No calculators. Then draw the parent graph using the key points.**

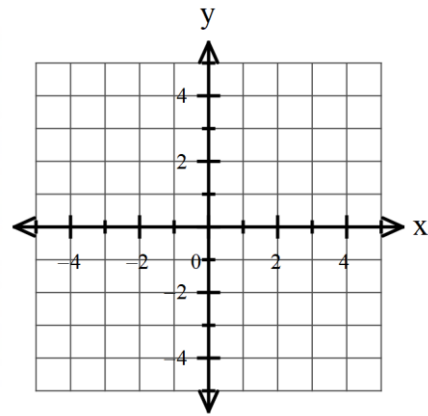
7.  $y = |x|$

$x$	work	$y$
-2	$ -2  =$	2
-1		1
0	$ 0  =$	
1		
2		



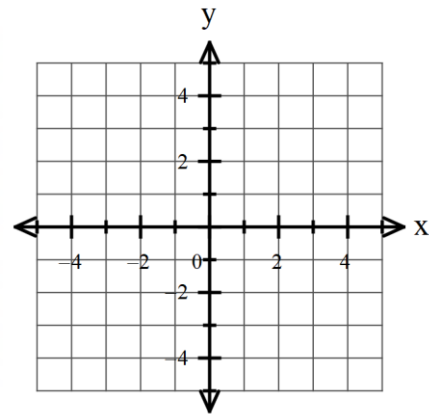
8.  $y = x^2$

$x$	work	$y$
-2	$(-2)^2 =$	4
-1		1
0	$(0)^2 =$	
1		
2		



9.  $y = x$

$x$	work	$y$
-2	$-2 =$	-2
-1		-1
0	$0 =$	
1		
2		



10.  $y = \sqrt{x}$

$x$	work	$y$
-1	$\sqrt{-1} =$	error
0		0
1	$\sqrt{1} =$	
4		
9		

