SM 2

Name:_____ Period:_____

SM2 1.5 One-Step Transformations

For each graph, do the following:

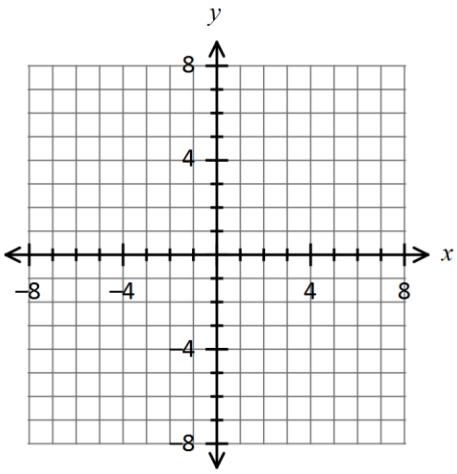
1. **Identify the parent graph ($y = |x|$, $y = x^2$, or $y = \sqrt{x}$).**
2. **Fill in the *x*, *y* table for the parent graph.**
3. **Draw the graph of the parent graph with a dashed line.**
4. **Identify the transformation.**
5. **Fill in the *x*, *y* table for the transformation.**
6. **Draw the final graph with a solid line.**

1. $y = -x^2$

Parent Graph:_____ Transformation:_____

x	*y*
–2	
–1	
0	
1	
2	

x	*y*

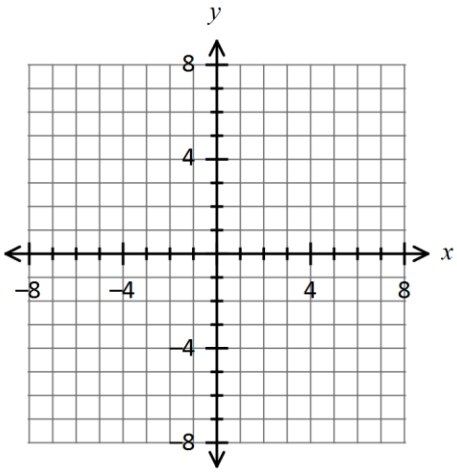


2. $y = 4\sqrt{x}$

Parent Graph:_____ Transformation:_____

x	*y*
0	
1	
4	

x	*y*

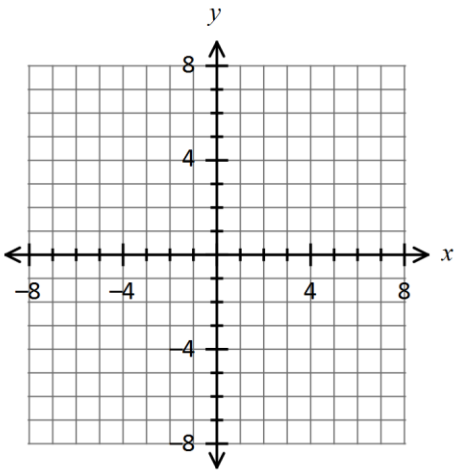


3. $y = \frac{1}{3}|x|$

Parent Graph:_____ Transformation:_____

x	y
–2	
–1	
0	
1	
2	

x	y

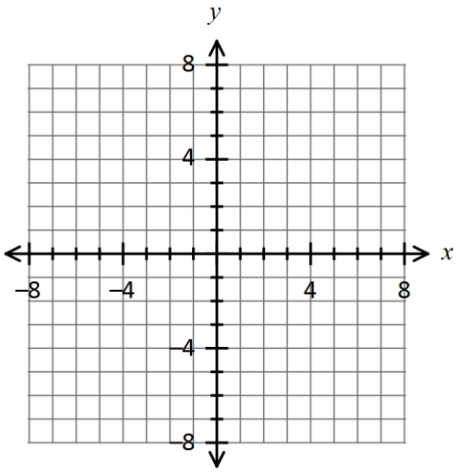


4. $y = \sqrt{x} + 2$

Parent Graph:_____ Transformation:_____

x	y
0	
1	
4	

x	y

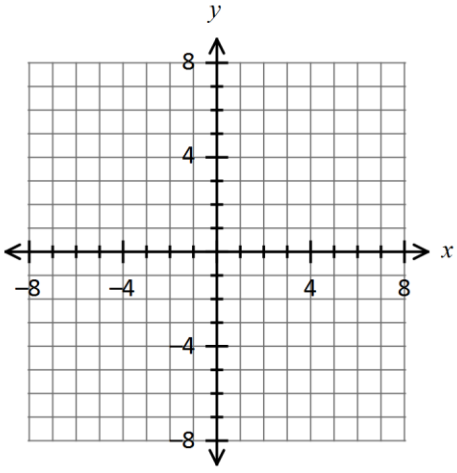


5. $y = |x| - 4$

Parent Graph:_____ Transformation:_____

x	y
–2	
–1	
0	
1	
2	

x	y

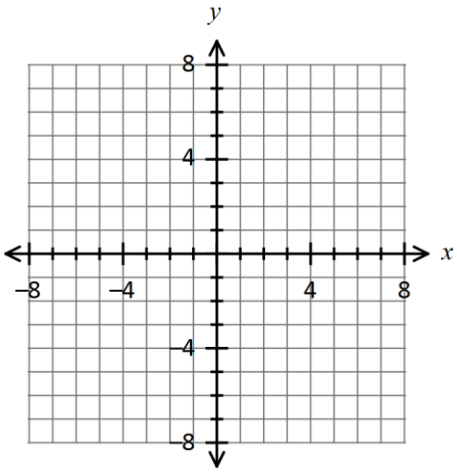


6. $y = x^2 + 3$

Parent Graph:_____ Transformation:_____

x	y
–2	
–1	
0	
1	
2	

x	y

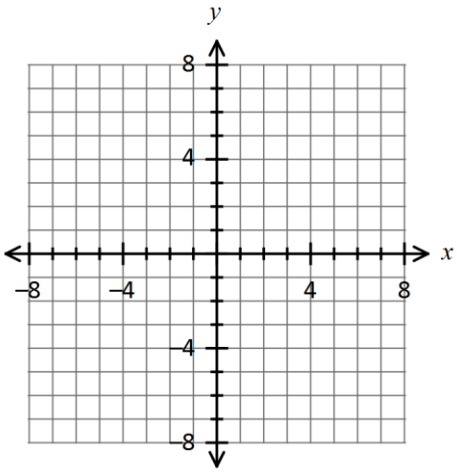


7. $y = (x+3)^2$

Parent Graph:_____ Transformation:_____

x	y

x	y

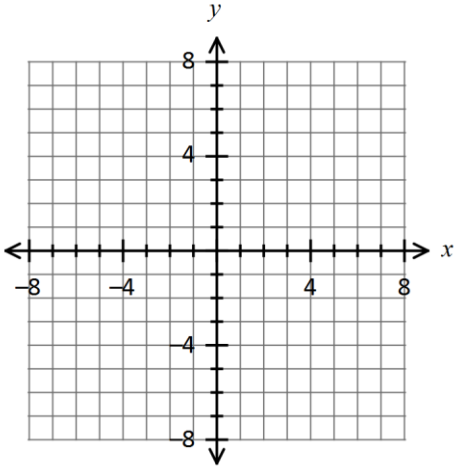


8. $y = |x-1|$

Parent Graph:_____ Transformation:_____

x	y

x	y

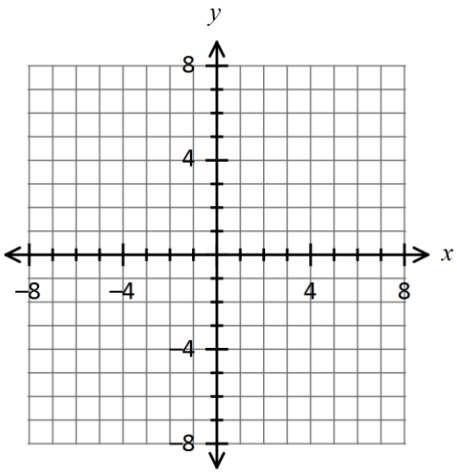


9. $y = \sqrt{x+2}$

Parent Graph:_____ Transformation:_____

x	y

x	y

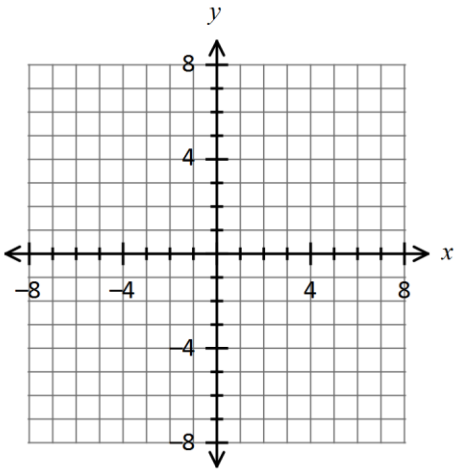


10. $y = |x+4| - 2$

Parent Graph:_____ Transformation:_____

x	y

x	y

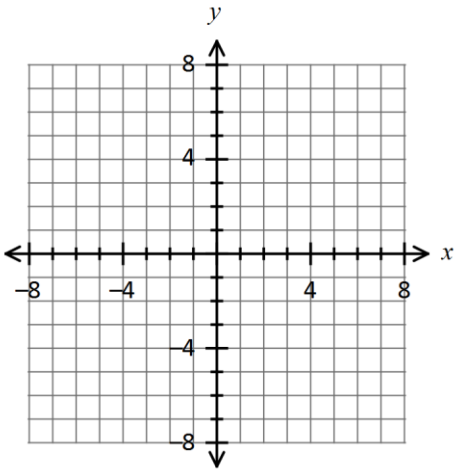


11. $y = (x-2)^2 + 1$

Parent Graph:_____ Transformation:_____

x	y

x	y

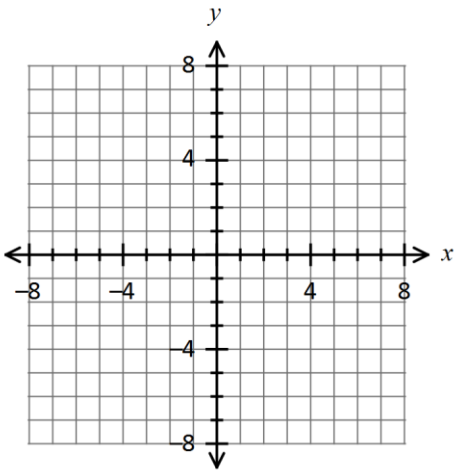


12. $y = \sqrt{x-3} - 3$

Parent Graph:_____ Transformation:_____

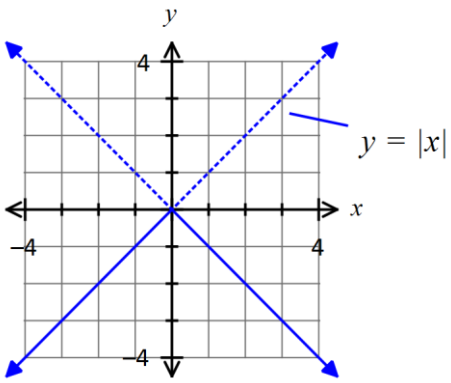
x	y

x	y



On each graph, the parent graph is shown as a dashed line, and a transformed graph is shown as a solid line. Determine what transformation of the parent graph was performed and write an equation of the final graph.

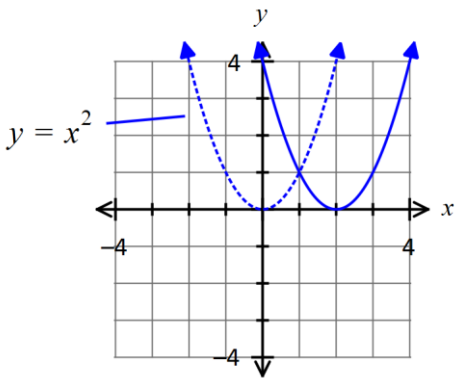
13.



Transformation:_____

Equation:_____

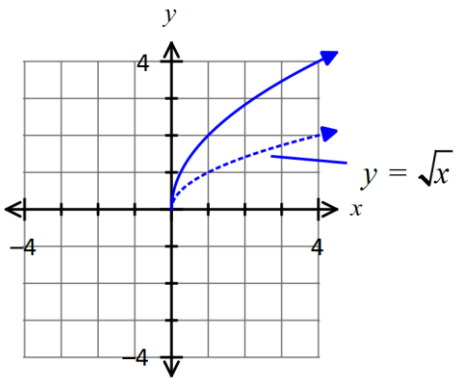
14.



Transformation:_____

Equation:_____

15.



Transformation:_____

Equation:_____