

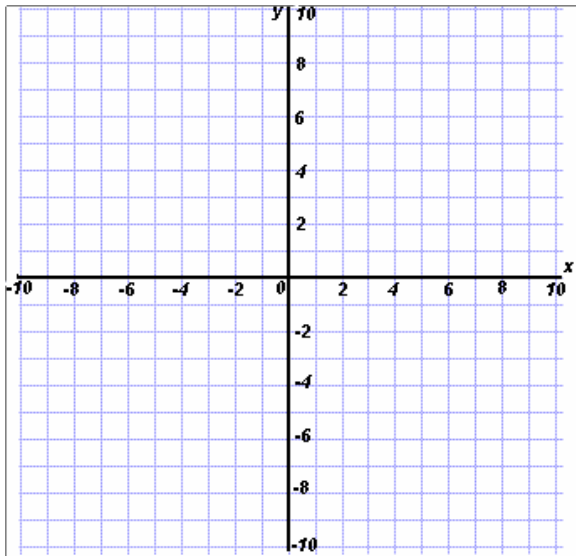
8.3 Classwork

Each row of the table below describes a single transformation of the parent function $y = |x|$ or $y = x^2$. Complete the table.

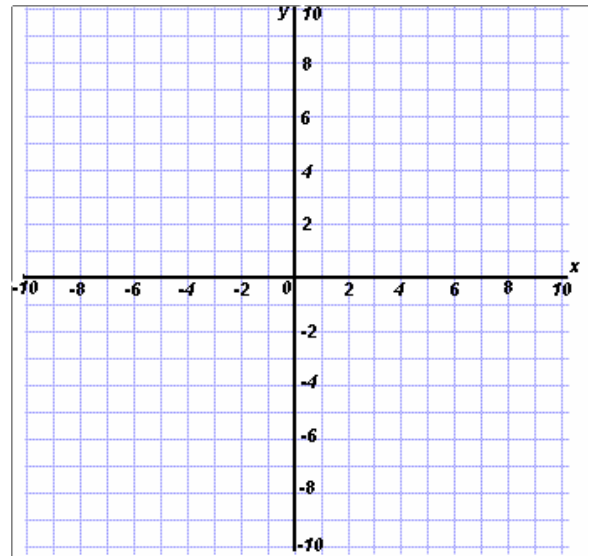
	Parent Function	Replacement(s)	New equation in $y =$ form	Describe the transformation
Ex.	$y = x $	replace x with $x + 5$	$y = x + 5 $	Translation left 5 units
1)	$y = x $			Translation down 2 units
2)	$y = x $	replace x with $-x$		
3)	$y = x $	replace y with $y + 3$		
4)	$y = x $			Reflection across the x -axis
5)	$y = x $		$y = x - 1 $	
6)	$y = x $	replace y with $-y$		
7)	$y = x $		$y = x - 6$	
8)	$y = x^2$			Translate up 3 <i>and</i> right 5 units
9)	$y = x^2$	replace x with $x - 4$		
10)	$y = x^2$		$y = -x^2$	
11)	$y = x^2$			Reflection over the y -axis
12)	$y = x^2$		$y = (x - 3)^2 - 8$	
13)	$y = x^2$	replace y with $y + 3$ replace x with $x - 2$		
14)	$y = x^2$			Translate left 5 units and reflect over the x -axis

Graph the following functions:

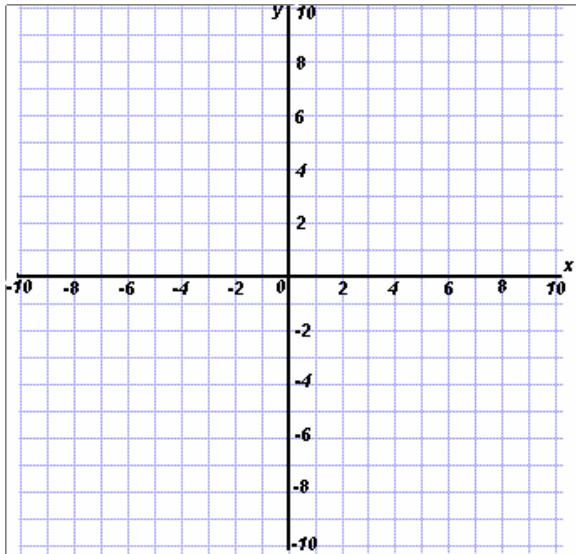
15) $y = |x + 5|$



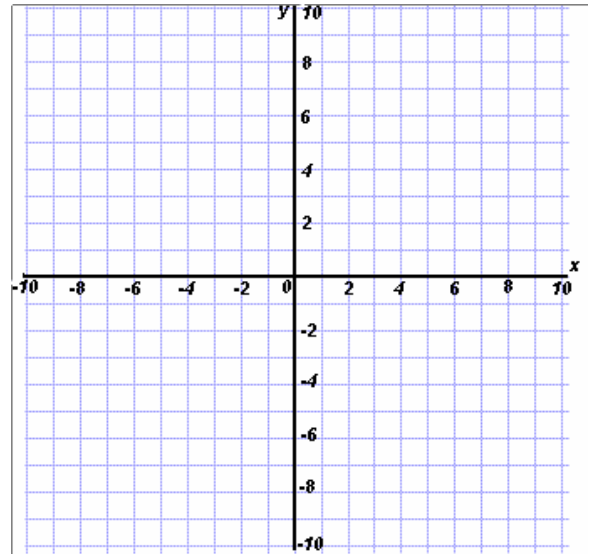
16) $y = -|x|$



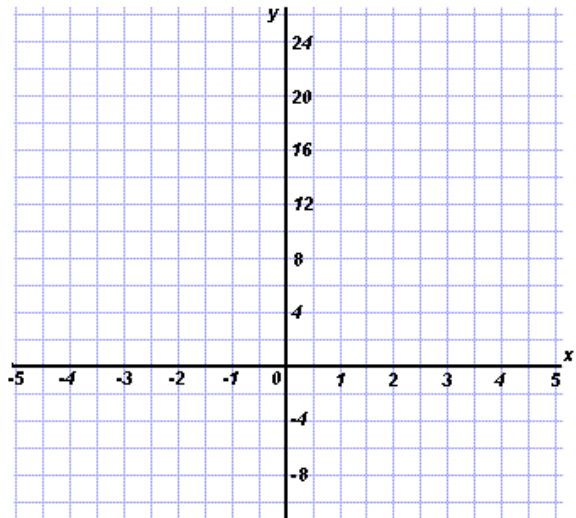
17) $y = |x - 2| - 3$



18) $y = -|x - 2|$



19) $y = x^2 - 4$



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

