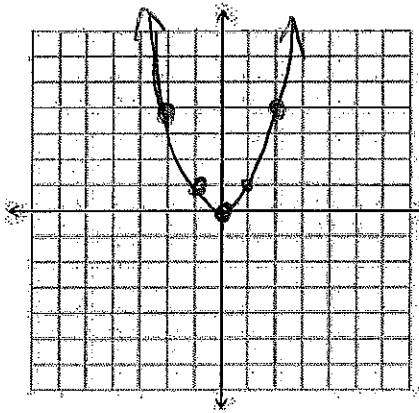
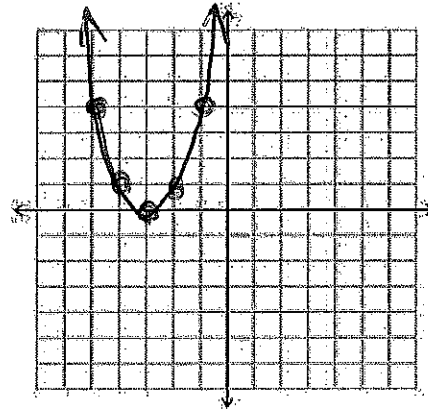


Parent Graphs and Transformations: Parabolas



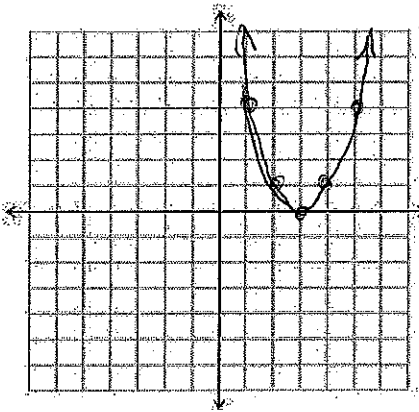
X	Y
-2	4
-1	1
0	0
1	1
2	4

$f(x) = x^2$
 $f(x) \rightarrow f(x)$



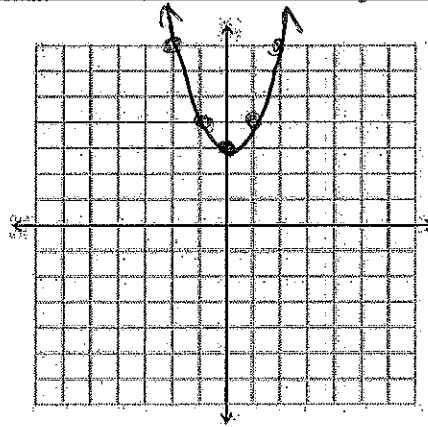
X	Y
-5	4
-4	1
-3	0
-2	1
-1	4

$f(x) = (x+3)^2$
 $f(x) \rightarrow F(x+3)$



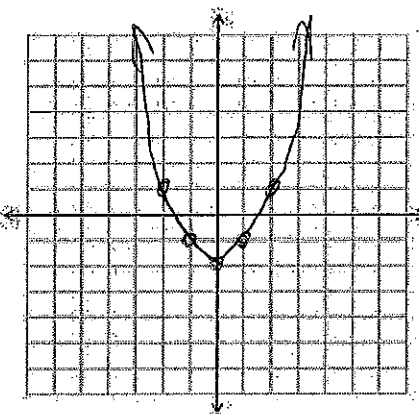
X	Y
1	4
2	1
3	0
4	1
5	4

$f(x) = (x-3)^2$
 $f(x) \rightarrow f(x-3)$



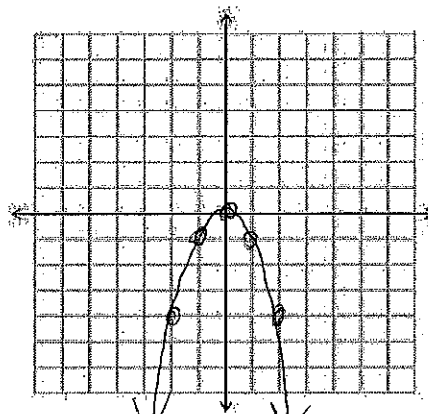
X	Y
-2	7
-1	4
0	3
1	4
2	7

$f(x) = x^2 + 3$
 $f(x) \rightarrow f(x) + 3$



X	Y
-2	1
-1	-2
0	-3
1	-2
2	1

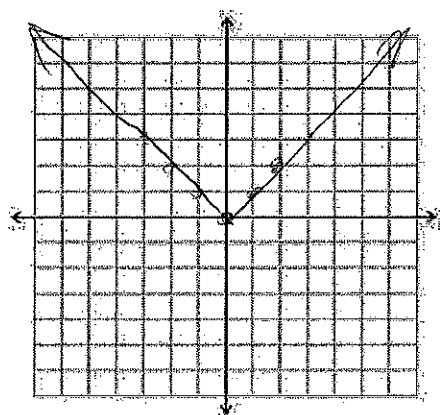
$f(x) = x^2 - 3$
 $f(x) \rightarrow f(x) - 3$



X	Y
-2	-4
-1	-1
0	0
1	-1
2	-4

$f(x) = -x^2$
 $f(x) \rightarrow -f(x)$

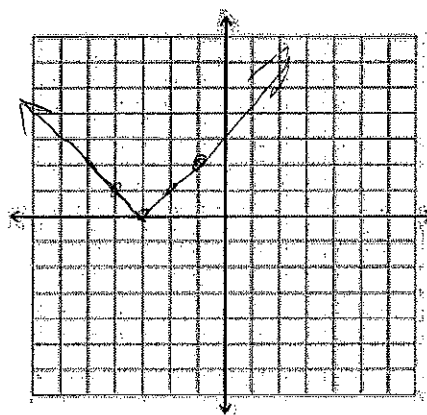
Parent Graphs and Transformations: Absolute Value



x	y
-2	2
-1	1
0	0
1	1
2	2

$$f(x) = |x|$$

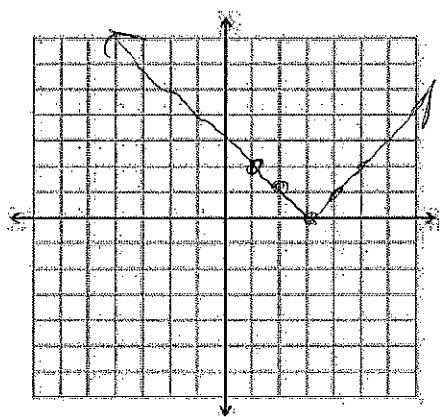
$$f(x) \rightarrow f(x)$$



x	y
-5	2
-4	1
-3	0
-2	1
-1	2

$$f(x) = |x + 3|$$

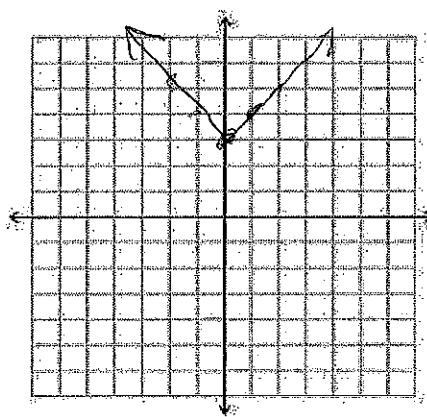
$$f(x) \rightarrow f(x + 3)$$



x	y
1	2
2	1
3	0
4	1
5	2

$$f(x) = |x - 3|$$

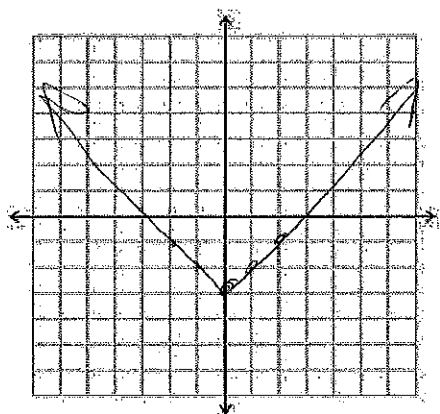
$$f(x) \rightarrow f(x - 3)$$



x	y
-2	5
-1	4
0	3
1	4
2	5

$$f(x) = |x| + 3$$

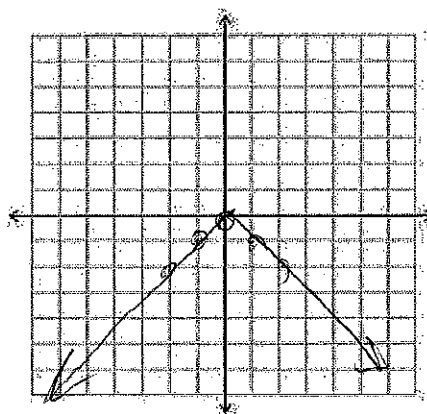
$$f(x) \rightarrow f(x) + 3$$



x	y
-2	-1
-1	-2
0	-3
1	-2
2	-1

$$f(x) = |x| - 3$$

$$f(x) \rightarrow f(x) - 3$$



x	y
-2	-2
-1	-1
0	0
1	-1
2	-2

$$f(x) = -|x|$$

$$f(x)$$