

The Function: Linear

The Base Function	$y = x$
A Transformed Function	$y = -\frac{3}{4}x + 2$

Base	
x	y
-2	
-1	
0	
1	
2	

Transformed	
x	y
-2	
-1	
0	
1	
2	

The Function: Quadratic

The Base Function	$y = x^2$
A Transformed Function	$y = -2(x - 4)^2 + 3$

Base	
x	y
-2	
-1	
0	
1	
2	

Transformed	
x	y
2	
3	
4	
5	
6	

The Relation: Circle

The Base Function	$x^2 + y^2 = r^2$ (we will use $r=5$) $y = \pm\sqrt{5^2 - x^2}$
A Transformed Function	$(x - 2)^2 + (y + 3)^2 = 5^2$ $y = \pm\sqrt{5^2 - (x - 2)^2} - 3$

Use for calculations

Base		
x	y	y
-5		
-1		
0		
1		
5		

Transformed		
x	y	y
-3		
1		
2		
3		
7		

The Function: Root

The Base Function	$y = \sqrt{x}$
A Transformed Function	$y = -2\sqrt{x + 3} + 4$

Base	
x	y
0	
1	
4	
9	

Transformed	
x	y
-3	
-2	
1	
6	

The Function: Cubic

The Base Function	$y = x^3$
A Transformed Function	$y = \frac{1}{2}(x - 2)^3 - 4$

Base	
x	y
-2	
-1	
0	
1	
2	

Transformed	
x	y
0	
1	
2	
3	
4	

The Function: Absolute Value

The Base Function	$y = x $
A Transformed Function	$y = -3 x - 2 - 5$

Base	
x	y
-2	
-1	
0	
1	
2	

Transformed	
x	y
0	
1	
2	
3	
4	

The Function: Reciprocal

The Base Function	$y = \frac{1}{x}$
A Transformed Function	$y = \frac{1}{x + 2} - 3$

Base	
x	y
-2.5	
-2	
-1.5	
-1	
-0.5	
0	
0.5	
1	
1.5	
2	
2.5	

Transformed	
x	y
-4.5	
-4	
-3.5	
-3	
-2.5	
-2	
-1.5	
-1	
-0.5	
0	
0.5	