

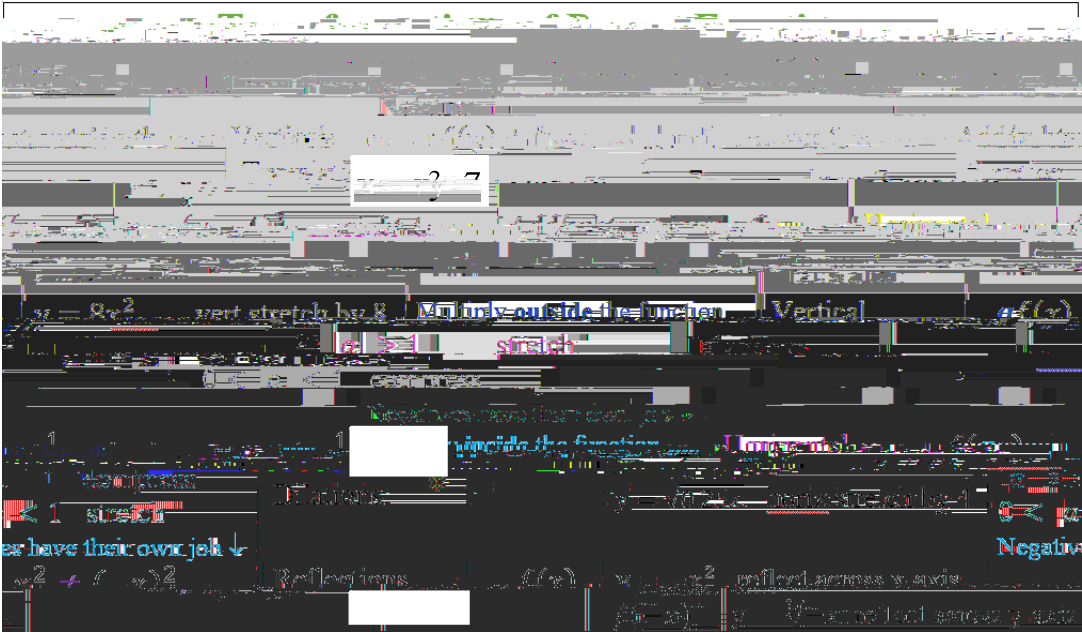
Notes 2.6 - Transformations of Functions

Have you ever heard of parent functions?

What happens to the words on a shirt when you look in the mirror?

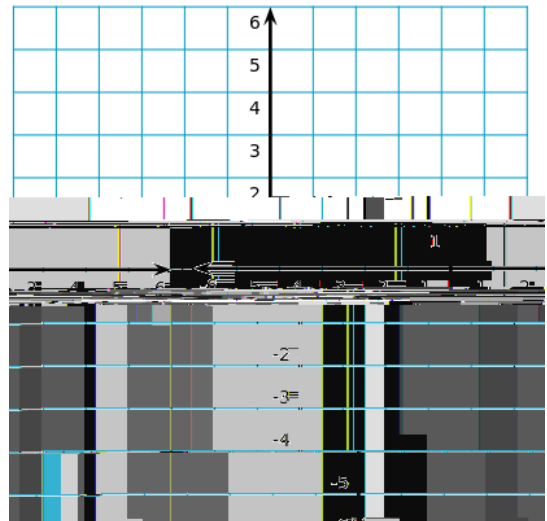
If I move a desk across the room, does its shape change?

Constant	Linear	Quadratic	Cubic	Exponential	Family	Absolute Value
$f(x) = c$	$f(x) = mx + b$	$f(x) = ax^2 + bx + c$	$f(x) = ax^3 + bx^2 + cx + d$	$f(x) = a^x$	$f(x) = a^x + b$	$f(x) = x $
$x > 0$	Domain	\mathbb{R}	\mathbb{R}	\mathbb{R}	\mathbb{R}	\mathbb{R}
$y \geq v$	$x \geq 0$	$y \geq 0$	range	$y = c$	x	$(0, 0)$
$(0, 0)$	$(0, 0)$	$(0, 0)$	Intersects	$(0, c)$	$(0, 0)$	$(0, 0)$



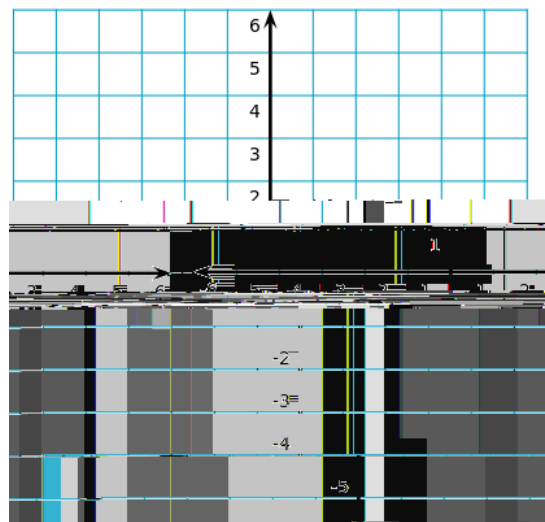
Describe the translation as it relates to graph. Then sketch the function.

$y = x^2 + 2x - 3$
Quadratic



$y = x + 2$
linear

$y = x^2 + 4x + 4$
Cu



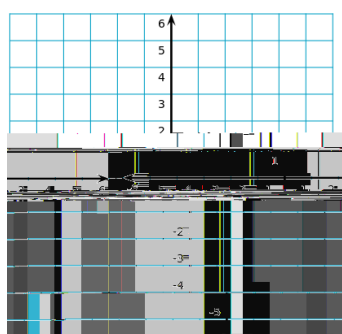
Describe the translation as it relates to its parent graph.



Describe the translation as it relates to its parent graph.

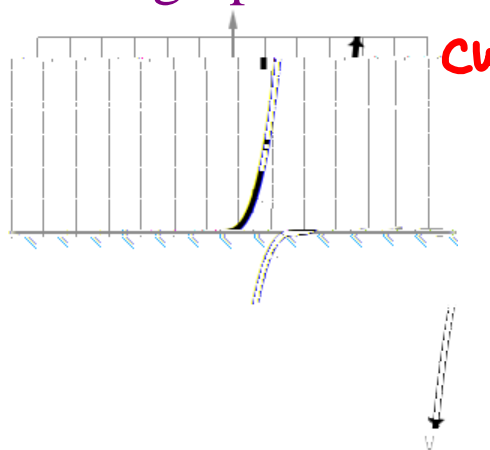
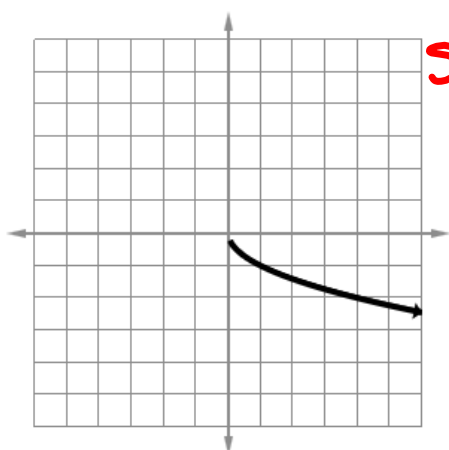


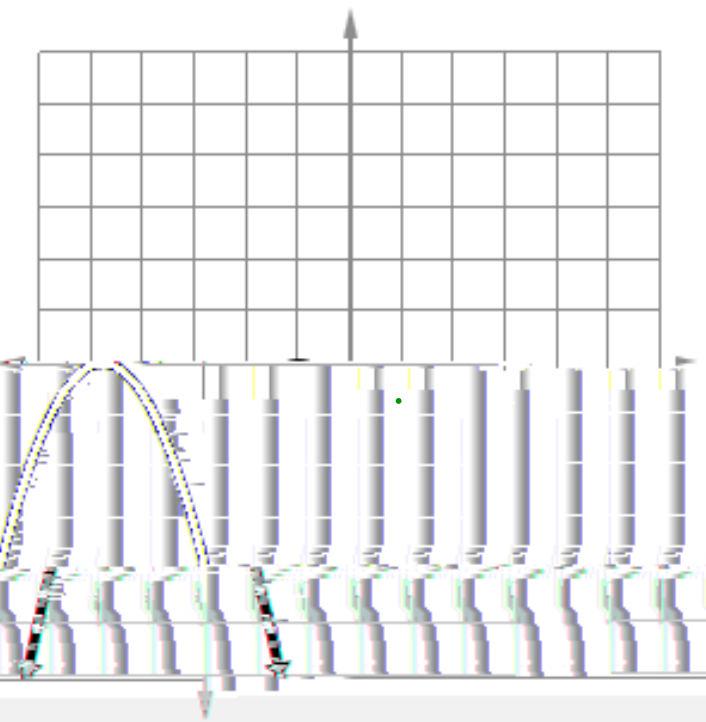
Name the parent function. Describe the transformation(s). Sketch the graph.



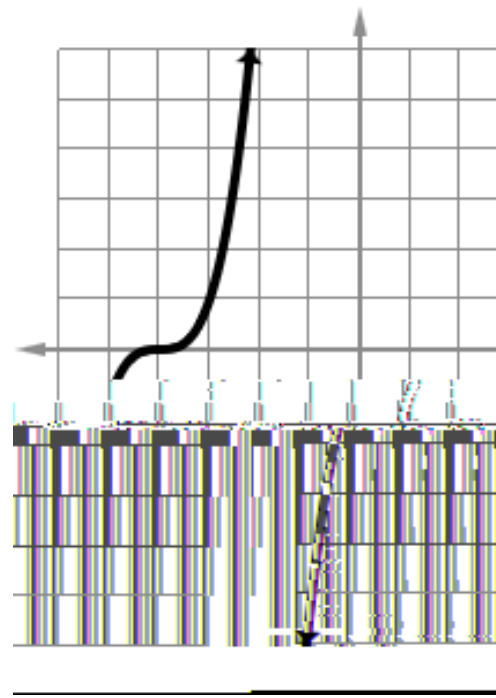
Sq. r

Describe the transformation shown in the graph when compared to the parent function. The write the function that represents the graph.

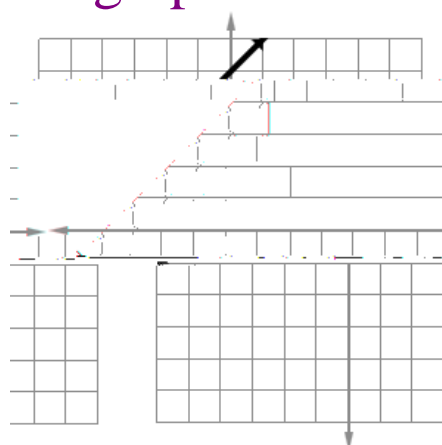
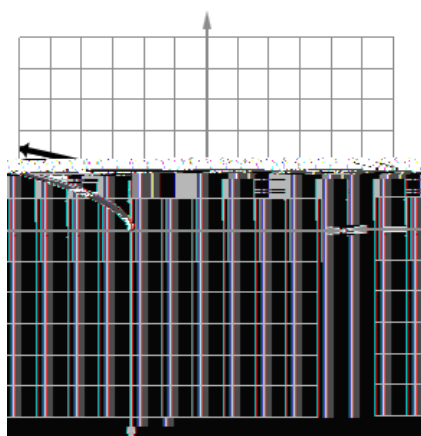




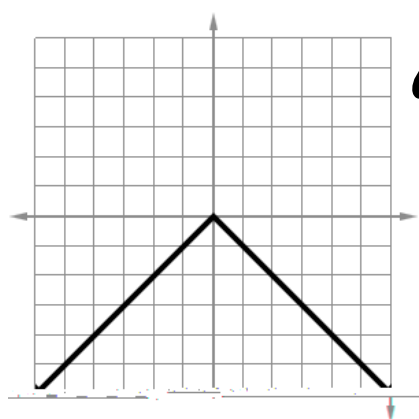
Qua



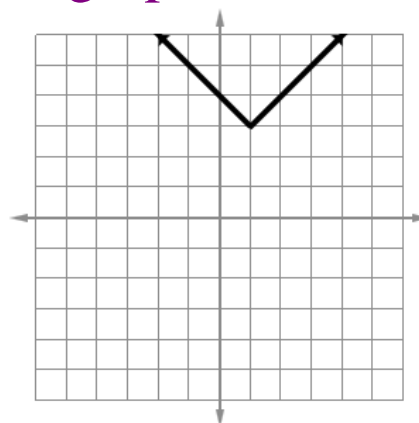
Describe the transformation shown in the graph when compared to the parent function. The write the function that represents the graph.



Describe the transformation shown in the graph when compared to the parent function. Then write the function that represents the graph.



abs



Suppose a QUADRATIC function is **translated** 4 units left and is **reflected** across the x-axis. Write that function.

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

Suppose a cubic function is **translated** up 9 units and is **reflected** across the y-axis. Write that function.

