

Transformation	Function	Description
Horizontal Shift	$f(x - h)$	$h > 0$ : shift right $h$ units
		$h < 0$ : shift left $h$ units
Vertical Shift	$f(x) + k$	$k > 0$ : shift up $k$ units
		$k < 0$ : shift down $k$ units
Reflection	$-f(x)$	Reflect across the $x$ -axis
	$f(-x)$	Reflect across the $y$ -axis
Horizontal Stretch/Compress	$f(ax)$	$a > 1$ : Compress horizontally by a factor of $1/a$
		$0 < a < 1$ : Stretch horizontally by a factor of $1/a$
Vertical Stretch/Compress	$bf(x)$	$b > 1$ : Stretch vertically by a factor of $b$
		$0 < b < 1$ : Compress vertically by a factor of $b$