Transformations	Effect On Graph
$f(x) + a$	Graph shifts 'a' boxes up (No effect on spread)
$f(x) - a$	Graph shifts 'a' boxes down. (No effect on spread)
$f(x+a)$	Graph shifts 'a' boxes to the left
$f(x-a)$	Graph shifts 'a' boxes to the right
$-f(x)$	Reflection in x-axis
$f(-x)$	Reflection in y-axis

$a f(x)$	Stretch parallel to y-axis with factor 'a' • $a > 1$, stretch vertically • $a < 1$, squeeze vertically
$f(ax)$	Stretch parallel to x-axis with factor $\left[\dfrac{1}{a}\right]$ • $a > 1$, squeeze Horizontally • $a < 1$, stretch horizontally