Transformations of Functions

Horizontal Shifts:	$f(x+h)$ $f(x-h)$	+h inside moves LEFT -h inside moves RIGHT
Vertical Shifts:	$f(x)+k$ $f(x)-k$	+k outside moves UP -k outside moves DOWN
Reflections:	$f(-x)$ $-f(x)$	Multiplying inputs by -1 will reflect over the Y-AXIS Multiplying outputs by -1 will reflect over the X-AXIS
Vertical Stretches/Shrinks:	$c \cdot f(x)$	Multiplying outputs by $c > 1$ is a VERTICAL STRETCH by a FACTOR OF C Multiplying outputs by $0 < c < 1$ is a VERTICAL SHRINK by a FACTOR OF C
Horizontal Stretches/Shrinks:	$f(c \cdot x)$	Multiplying inputs by $c > 1$ is a HORIZONTAL SHRINK by a FACTOR of $\frac{1}{c}$ Multiplying inputs by $0 < c < 1$ is a HORIZONTAL STRETCH by a FACTOR of $\frac{1}{c}$