

Composition of Functions for a Given Function f		
Addition of a new rule to generate $h(x)$	Graph of $h(x)$ compared to graph of $f(x)$	New rule is applied to the ...
$h(x) = f(x) + c$	Shift up c	image of f (changes are vertical)
$h(x) = f(x) - c$	Shift down c	
$h(x) = cf(x)$ where $c > 1$	Expand (stretch) vertically away from the x-axis by a factor of c	
$h(x) = \frac{f(x)}{c}$ where $c > 1$ or $h(x) = \frac{1}{c}f(x)$ where $0 < \frac{1}{c} < 1$	Compress (shrink) vertically toward the x-axis by a factor of c	
$h(x) = -f(x)$	Flip upside down (geometric reflection) through the x-axis	
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$h(x) = f(x + c)$	Shift left c	argument of f (changes are horizontal)
$h(x) = f(x - c)$	Shift right c	
$h(x) = f(cx)$ where $c > 1$	Compress (shrink) horizontally toward the y-axis by a factor of c	
$h(x) = f\left(\frac{x}{c}\right)$ where $c > 1$ or $h(x) = f\left(\frac{1}{c}x\right)$ where $0 < \frac{1}{c} < 1$	Expand (stretch) horizontally away from the y-axis by a factor of c	
$h(x) = f(-x)$	Geometric reflection through the y-axis	
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