

# Function Transformations

February 11, 2017 22:35

## 1. Shifts

$y = f(x) + C$	<ul style="list-style-type: none"><li>• <math>C &gt; 0</math> moves it up</li><li>• <math>C &lt; 0</math> moves it down</li></ul>
$y = f(x + C)$	<ul style="list-style-type: none"><li>• <math>C &gt; 0</math> moves it left</li><li>• <math>C &lt; 0</math> moves it right</li></ul>
$y = Cf(x)$	<ul style="list-style-type: none"><li>• <math>C &gt; 1</math> stretches it in the y-direction</li><li>• <math>0 &lt; C &lt; 1</math> compresses it</li></ul>
$y = f(Cx)$	<ul style="list-style-type: none"><li>• <math>C &gt; 1</math> compresses it in the x-direction</li><li>• <math>0 &lt; C &lt; 1</math> stretches it</li></ul>
$y = -f(x)$	<ul style="list-style-type: none"><li>• Reflects it about x-axis</li></ul>
$y = f(-x)$	<ul style="list-style-type: none"><li>• Reflects it about y-axis</li></ul>