



## Function Transformations (Definition) - Single Transformation (Variables) to

### Definition

<p>1</p> <p>What does this transformation produce in f(x)?</p> $g(x) = f(z \cdot x)$ $z < 1$	<p>2</p> <p>What does this transformation produce in f(x)?</p> $g(x) = m \cdot f(x)$ $m < 1$		
<p>A</p> <p>Horizontal stretch: <math>z</math></p>	<p>B</p> <p>Vertical stretch: <math>z</math></p>	<p>A</p> <p>Vertical stretch: <math>m</math></p>	<p>B</p> <p>Vertical compression: <math>m</math></p>
<p>C</p> <p>Horizontal compression: <math>z</math></p>		<p>C</p> <p>Horizontal compression: <math>m</math></p>	
<p> </p>			
<p>3</p> <p>What does this transformation produce in f(x)?</p> $g(x) = f(x + m)$		<p>4</p> <p>What does this transformation produce in f(x)?</p> $g(x) = t \cdot f(x)$ $t < 1$	
<p>A</p> <p>Shift left: <math>m</math></p>		<p>A</p> <p>Vertical compression: <math>t</math></p>	
<p>B</p> <p>Shift right: <math>m</math></p>		<p>B</p> <p>Vertical stretch: <math>t</math></p>	
<p> </p>			
<p>5</p> <p>What does this transformation produce in f(x)?</p> $g(x) = f(x + r)$		<p>6</p> <p>What does this transformation produce in f(x)?</p> $g(x) = n \cdot f(x)$ $n < 1$	
<p>A</p> <p>Shift right: <math>r</math></p>		<p>A</p> <p>Vertical compression: <math>n</math></p>	
<p>B</p> <p>Shift left: <math>r</math></p>		<p>B</p> <p>Vertical stretch: <math>n</math></p>	
<p> </p>			
<p>7</p> <p>What does this transformation produce in f(x)?</p> $g(x) = f(-x)$		<p>8</p> <p>What does this transformation produce in f(x)?</p> $g(x) = f(x) - r$	
<p>A</p> <p>Reflect in Y-Axis</p>		<p>A</p> <p>Shift down: <math>r</math></p>	
<p>B</p> <p>Reflect in X-Axis</p>		<p>B</p> <p>Shift up: <math>r</math></p>	