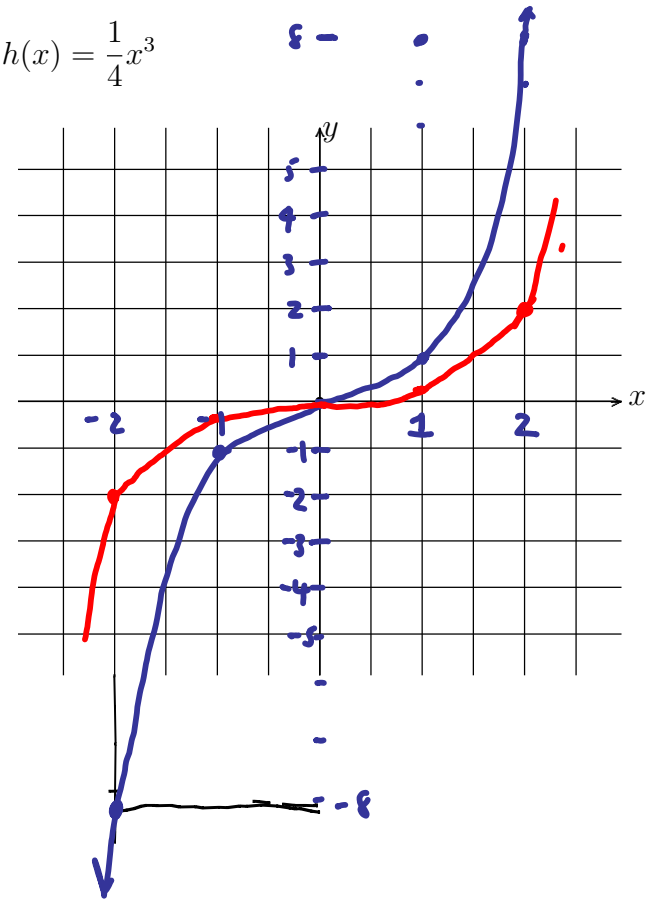
$h(x) = \frac{1}{4}x^3$

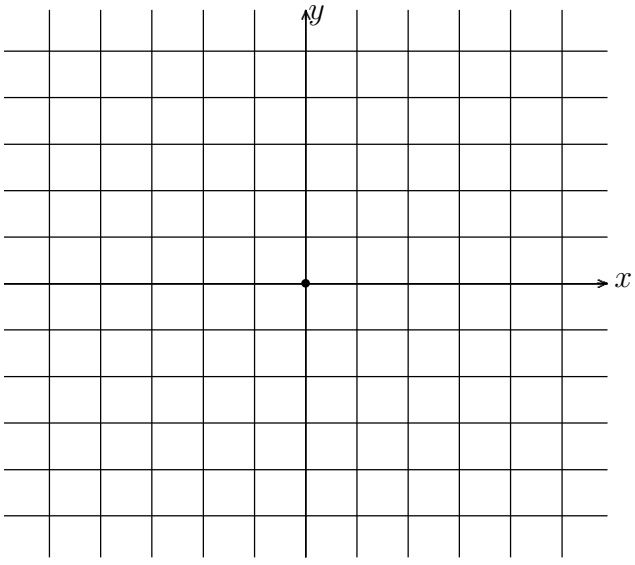


Start with $f(x) = x^3$

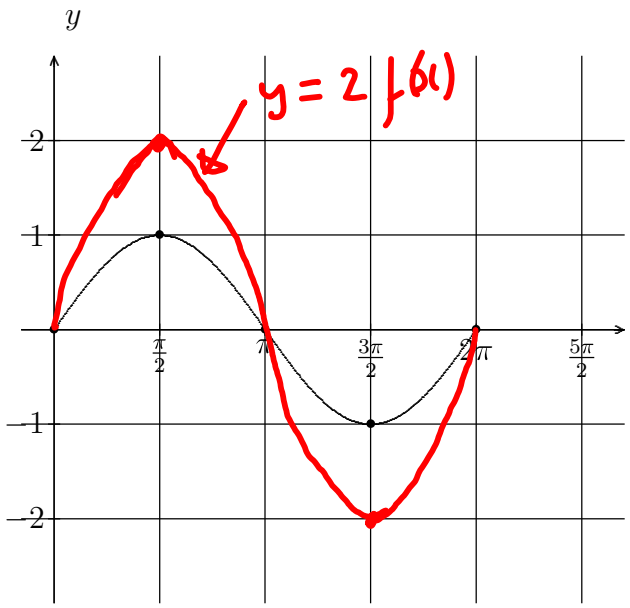
multiply $f(x)$ by constant $c = \frac{1}{4}$ &

$0 < \frac{1}{4} < 1$

Vertical compressing of graph of $f(x)$.



Graph $y = 2f(x)$

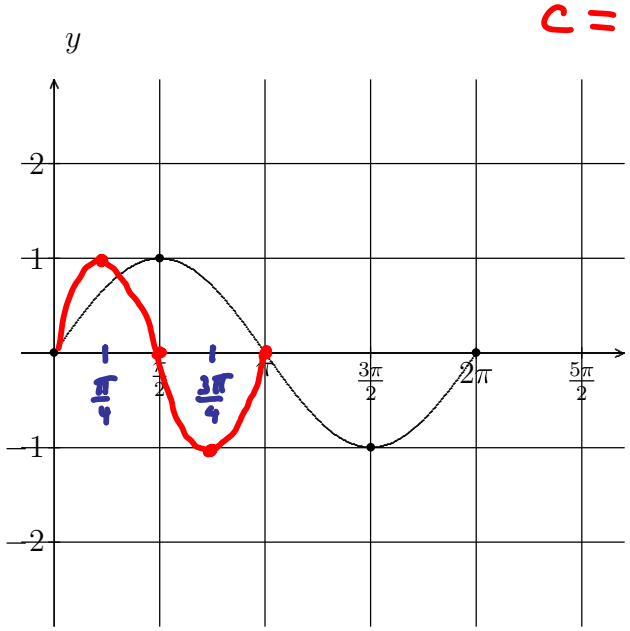


multiply f(x) by Constant $c = 2 > 1$

$\Rightarrow$ Vertical stretching.

Figure 1: Graph of $f(x)$

Graph $y = f(2x)$



Each x value is multiplied by Constant $c = 2 > 1$

$\Rightarrow$ Horizontal Compressing

$\therefore$ Each x value of f(x) is divided by 2

$2 \cdot \frac{\pi}{4} = \frac{\pi}{2}$

$2 \cdot \frac{\pi}{2}$

$f(2x) = f(\frac{\pi}{2}) = 1$

what is x?

$2x = \frac{\pi}{2}$

Figure 2: Graph of $f(x)$