

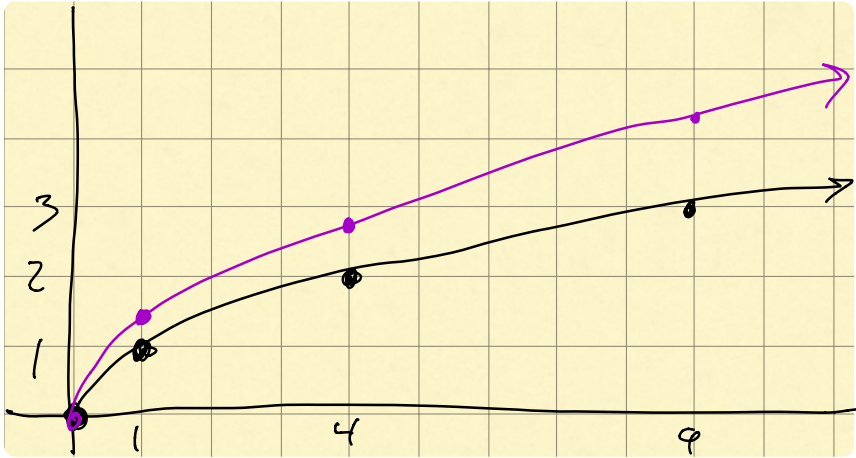
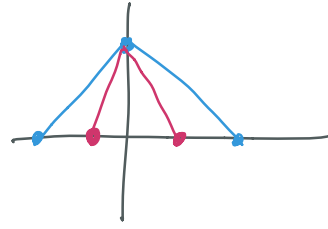
In General $y = A f(b(x-p)) + q$

\uparrow up/down
 \downarrow
 \uparrow left/right
 Compression/expansion of
 $x \rightarrow b, y \rightarrow A.$

Cheat Sheet

f^a	transformation	Mapping	Example
$y = -f(x)$	reflection over x-axis	$(x, y) \rightarrow (x, -y)$	
$y = f(-x)$	reflection over y-axis	$(x, y) \rightarrow (-x, y)$	
$y = Af(x)$	Stretch in y	$(x, y) \rightarrow (x, Ay)$	

$y = f(bx)$ | Compression in x-axis | (x, y)
 $\rightarrow (\frac{x}{b}, y)$



$$f(x) = \sqrt{x}$$

$$f(2x) = \sqrt{2x}$$

x	y
0	0
1	$\sqrt{2}$
4	$2\sqrt{2}$
9	$3\sqrt{2}$