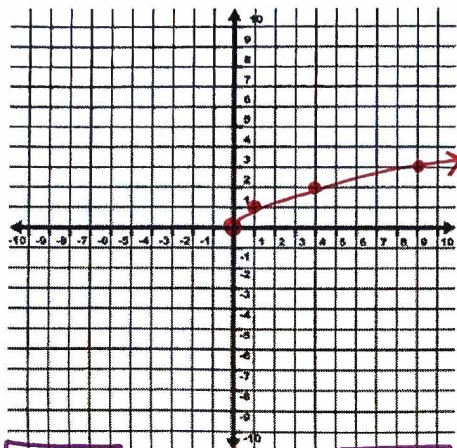


AA PREP: GRAPHING SQUARE ROOT FUNCTIONS WITH TRANSFORMATIONS

Graph the square root parent function. Then, graph each of the following square root functions using transformations. State domain and range.

1. $y = \sqrt{x}$

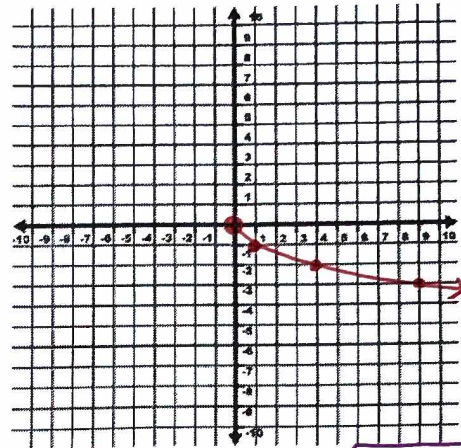
x	y
0	0
1	1
4	2
9	3



Domain: $x \geq 0$ $[0, \infty)$ Range: $y \geq 0$ $[0, \infty)$

2. $y = -\sqrt{x}$

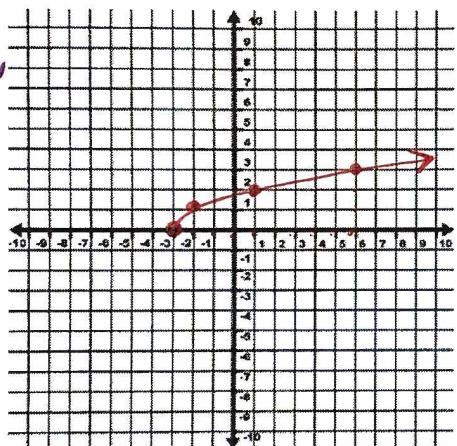
REFLECTION
OVER
X-AXIS



Domain: $x \geq 0$ $[0, \infty)$ Range: $y \leq 0$ $(-\infty, 0]$

3. $g(x) = \sqrt{x+3}$

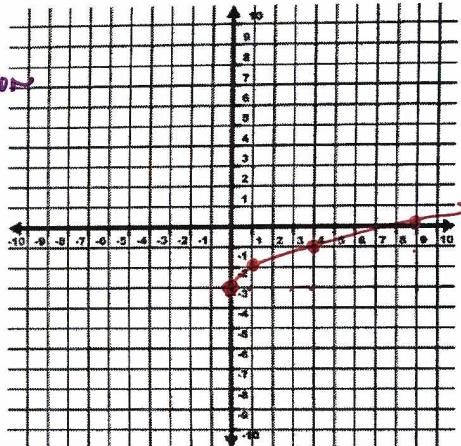
H TRANSFORMATION
3 (L)



Domain: $x \geq -3$ $[-3, \infty)$ Range: $y \geq 0$ $[0, \infty)$

4. $f(x) = \sqrt{x} - 3$

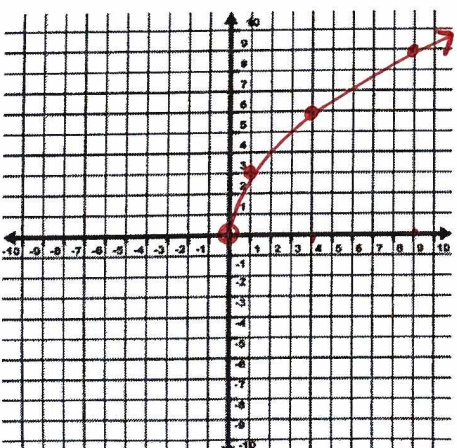
V TRANSFORMATION
3 (D)



Domain: $x \geq 0$ $[0, \infty)$ Range: $y \geq -3$ $[-3, \infty)$

5. $g(x) = 3\sqrt{x}$

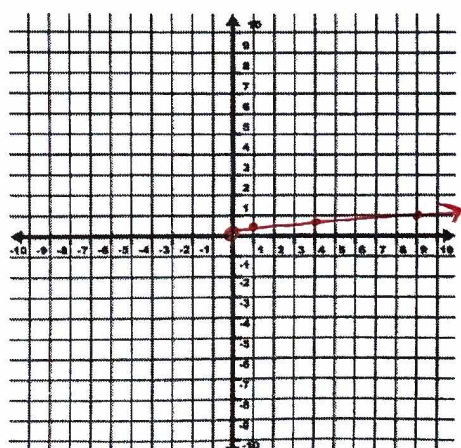
V STRETCH
 $\times 3$
(y-VALUES)
 $\times 3$



Domain: $x \geq 0$ $[0, \infty)$ Range: $y \geq 0$ $[0, \infty)$

6. $y = \frac{1}{3}\sqrt{x}$

V COMP.
 $\times \frac{1}{3}$
(y-VALUES)
 $\times \frac{1}{3}$



Domain: $x \geq 0$ $[0, \infty)$ Range: $y \geq 0$ $[0, \infty)$