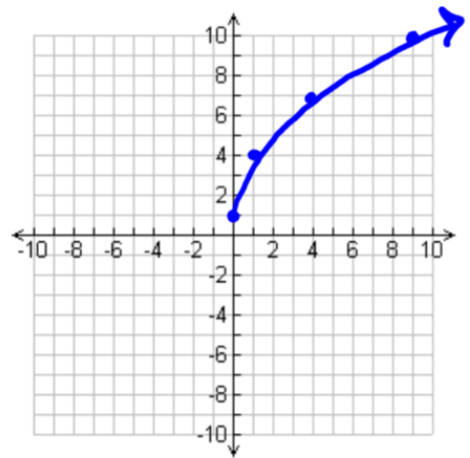


Graphing Radical & Absolute Value Functions Review

Graph the following functions & fill in the transformations and domain & range for each.

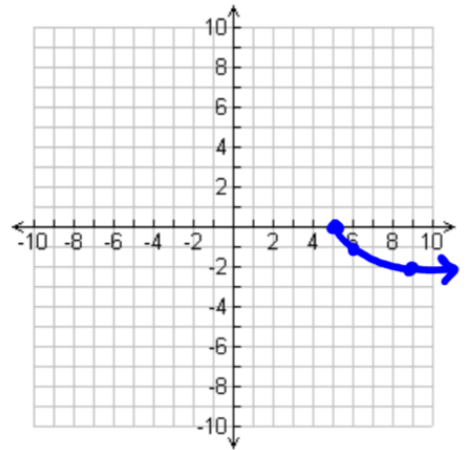
1. $y = 3\sqrt{x} + 1$ $a = \underline{3}$ $h = \underline{0}$ $k = \underline{1}$

Horizontal Shift None
 Vertical Shift up 1
 Stretch/Shrink Stretch
 Reflect? None
 Domain $[0, \infty)$
 Range $[1, \infty)$



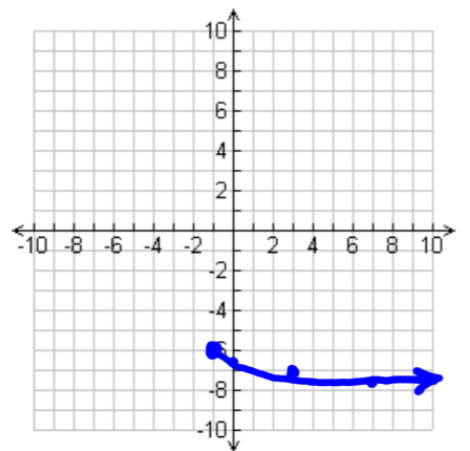
2. $y = -\sqrt{x - 5}$ $a = \underline{-1}$ $h = \underline{5}$ $k = \underline{0}$

Horizontal Shift right 5
 Vertical Shift None
 Stretch/Shrink No
 Reflect? yes
 Domain $[5, \infty)$
 Range $(-\infty, 0)$



3. $y = -\frac{1}{2}\sqrt{x + 1} - 6$ $a = \underline{-\frac{1}{2}}$ $h = \underline{-1}$ $k = \underline{-6}$

Horizontal Shift left 1
 Vertical Shift down 6
 Stretch/Shrink Shrink
 Reflect? yes
 Domain $[-1, \infty)$



Range $[-\infty, 6)$

4. $y = \sqrt[3]{x} + 7$ $a = 1$ $h = 0$ $k = 7$

Horizontal Shift None

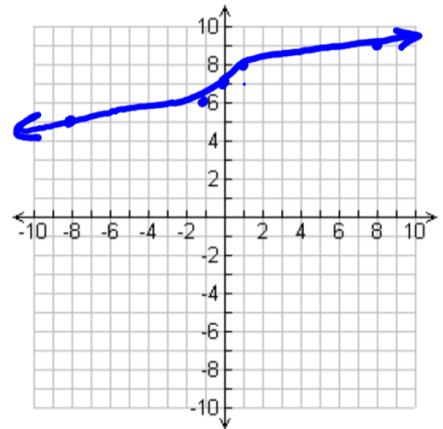
Vertical Shift up 7

Stretch/Shrink None

Reflect? None

Domain $[0, \infty)$

Range $[7, \infty)$



5. $y = 4\sqrt[3]{x-2}$ $a = 4$ $h = 2$ $k = 0$

Horizontal Shift up 2

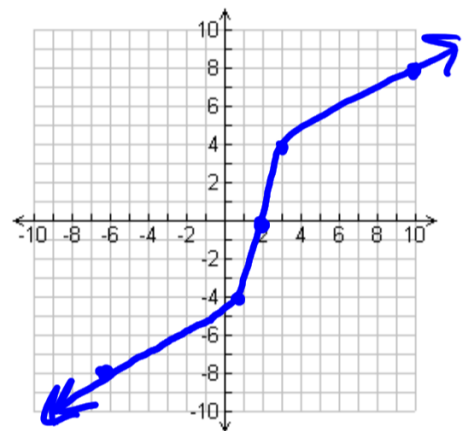
Vertical Shift None

Stretch/Shrink Stretch

Reflect? None

Domain $(-\infty, \infty)$

Range $(-\infty, \infty)$



6. $y = -2\sqrt[3]{x+3} + 2$ $a = -2$ $h = -3$ $k = 2$

Horizontal Shift left 3

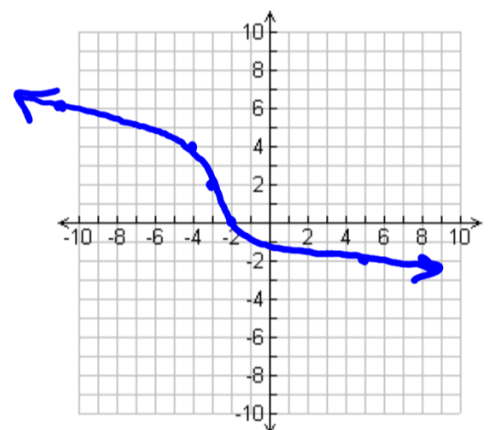
Vertical Shift up 2

Stretch/Shrink stretch

Reflect? yes

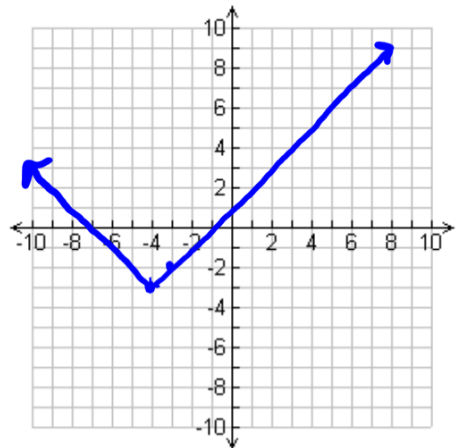
Domain $(-\infty, \infty)$

Range $(-\infty, \infty)$



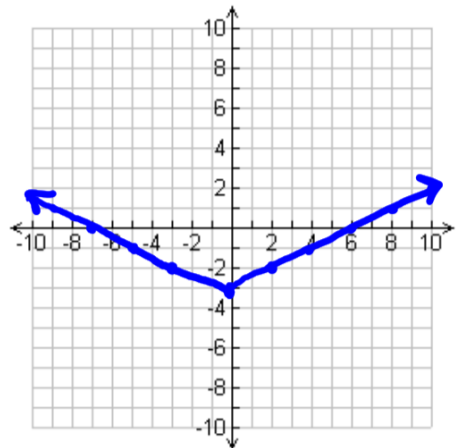
7. $y = |x + 4| - 3$ $a = \underline{1}$ $h = \underline{-4}$ $k = \underline{-3}$

Horizontal Shift left 4
 Vertical Shift down 3
 Stretch/Shrink None
 Reflect? None
 Domain $(-\infty, \infty)$
 Range $[-3, \infty)$



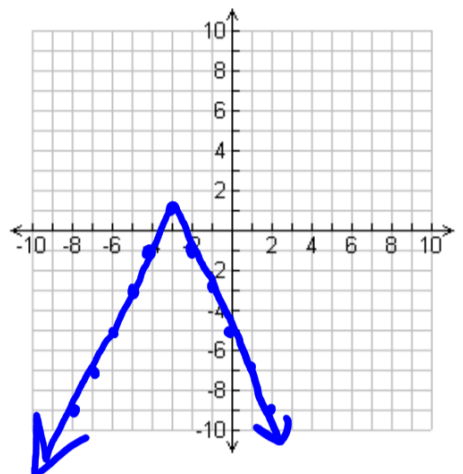
8. $y = \frac{1}{2}|x| - 3$ $a = \underline{\frac{1}{2}}$ $h = \underline{0}$ $k = \underline{-3}$

Horizontal Shift None
 Vertical Shift down 3
 Stretch/Shrink shrink
 Reflect? No
 Domain $(-\infty, \infty)$
 Range $[-3, \infty)$



9. $y = -2|x + 3| + 1$ $a = \underline{-2}$ $h = \underline{-3}$ $k = \underline{1}$

Horizontal Shift left 3
 Vertical Shift up 1
 Stretch/Shrink stretch
 Reflect? yes
 Domain $(-\infty, \infty)$
 Range $[-1, \infty)$



Matching: Match the function with its graph.

10. D. $y = 2\sqrt{x} - 3$

11. A. $y = \sqrt{x+6}$

12. F. $y = 3\sqrt[3]{x} + 1$

13. H. $y = \sqrt[3]{x-1}$

14. C. $y = -2\sqrt[3]{x+4}$

15. B. $y = |x-1| + 3$

16. E. $y = -|x| + 3$

17. G. $y = |x-3|$

