

March 6, 2015

$$h(x) = \sqrt{x-3} + 0$$

$h = 3$

Test for the Domain

$$x - 3 \geq 0$$

$$x \geq 3$$

Domain: $[3, \infty)$

x	h(x)
3	0
4	1
7	2
12	3

Mar 6-10:57 AM

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

The effect of h

- If $h > 0$, \sqrt{x} shifts h units to the right.
- If $h < 0$, \sqrt{x} shifts h units to the left.

Mar 6-11:30 AM

$$f(x) = \sqrt{x-5}$$

$h = +5 \rightarrow$ shifts 5 units to the right

$$= \sqrt{x-(+5)}$$

$$= \sqrt{x-5}$$

$$g(x) = \sqrt{x+2}$$

\rightarrow shifts 2 units to the left.

$h = -2$ why?

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

$$= \sqrt{x+2}$$

Mar 6-11:32 AM

$$f(x) = \sqrt{x-h} + k$$

$h = 2$ & $k = -3$

$$g(x) = \sqrt{x-2} - 3$$

Domain: $[2, \infty)$

$$x - 2 \geq 0$$

$$x \geq 2$$

Mar 6-11:36 AM

$$h(x) = \sqrt{x+4} + 2$$

$h = -4$ $k = 2$

D: $[-4, \infty)$

Mar 6-11:39 AM

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

D: $[0, \infty)$

x	f(x)
0	0
1	-1
4	-2
9	-3

$$g(x) = \sqrt{-x}$$

D: $(-\infty, 0]$

$$\frac{-x \geq 0}{\ominus \downarrow \ominus}$$

Divide by a negative
 $x \leq 0$ * Flip inequality

Mar 6-11:43 AM