

Where does it come from?
 x^2 and \sqrt{x} are **INVERSES**

x	x^2	x	\sqrt{x}
0	0	0	0
1	1	1	1
2	4	4	2
3	9	9	3

Solving Equations

$$\sqrt{2x+1} - 3 = 2$$

$$\sqrt{2x+1} + 3 = 2 + 3$$

$$(\sqrt{2x+1})^2 = (5)^2$$

$$2x + 1 = 25$$

$$2x = 24$$

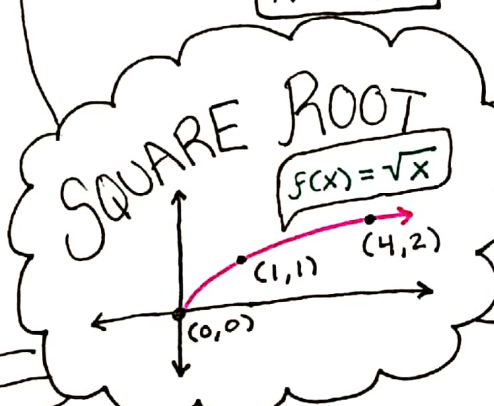
$$x = 12$$

with $\sqrt{\quad}$
 Isolate the $\sqrt{\quad}$

square both sides

solve for the variable

CHECK YOUR ANSWER!!

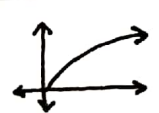



DOMAIN $[0, \infty)$
 $x \geq 0$

RANGE $[0, \infty)$
 $y \geq 0$

graphing

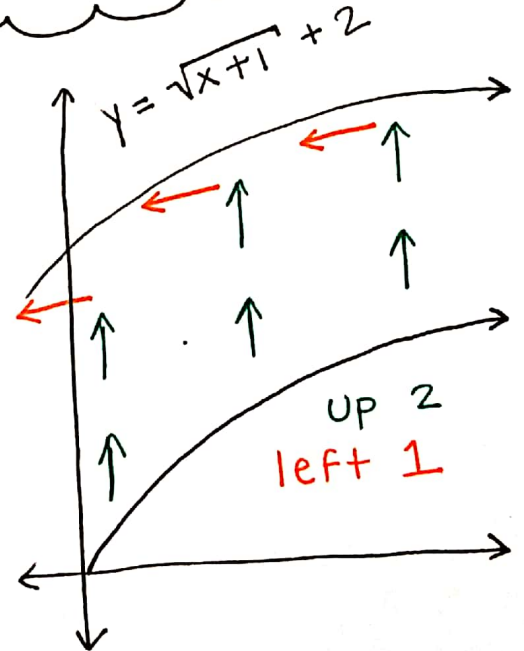
$$y = a\sqrt{x-h} + k$$

If $a > 0 \dots$  **a**

If $a < 0 \dots$  **a**

If $a > 1 \dots$ **STRETCHED**

$0 < a < 1 \dots$ **shrunk**



k

$\sqrt{x} + k$
 k units UP

$\sqrt{x} - k$
 k units DOWN

h

$\sqrt{x-h}$ h units RIGHT

$\sqrt{x+h}$ h units LEFT