

July 8, 2015

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

① Graph of Curve

② Domain

$$x-3 \geq 0$$

$$x \geq 3$$

$$[3, \infty)$$

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General Transformations

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

Horizontal Shift

- $+h \rightarrow \text{right}$
- $-h \rightarrow \text{left}$

Vertical Shift

- $+k \rightarrow \text{up}$
- $-k \rightarrow \text{down}$

Jul 8-2:28 PM

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

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

Domain: $x-2 \geq 0$
 $[2, \infty)$ $x \geq 2$

| x | g(x) |
|----|------|
| 2 | 0 |
| 6 | -2 |
| 11 | -3 |

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

$$h(x) = \sqrt{-x-1}$$

Domain: $-x-1 \geq 0$
 $(-\infty, -1]$

| x | h(x) |
|----|------|
| -1 | 0 |
| -2 | 1 |

$x \leq -1$ * When multiplying or dividing an inequality by a negative, change sign to opposite.

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$$s(x) = -\sqrt{-x+6} - 3$$

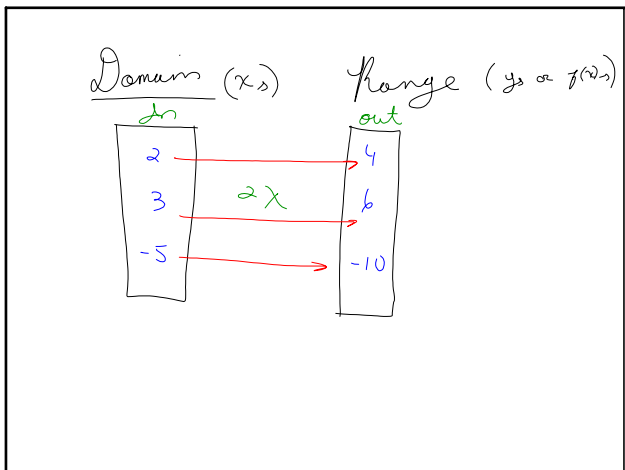
Domain: $-x+6 \geq 0$
 $(-\infty, 6]$

$$-x \geq -6$$

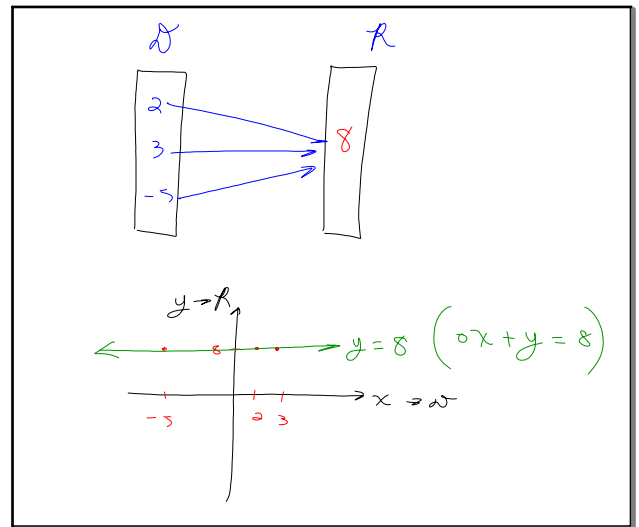
$$x \leq 6$$

$-x+6$
 $-(x-6)$

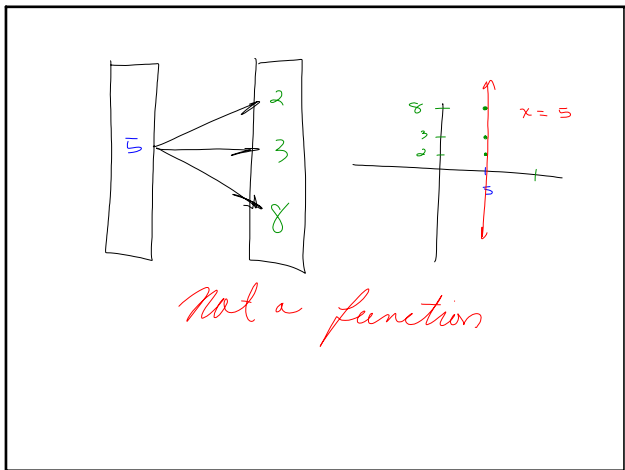
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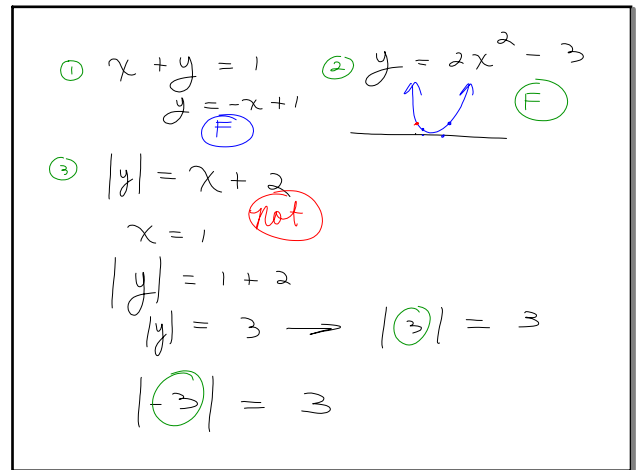
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Jul 8-3:14 PM



Jul 8-3:06 PM