

Section 6-3 Square Root Functions and Inequalities

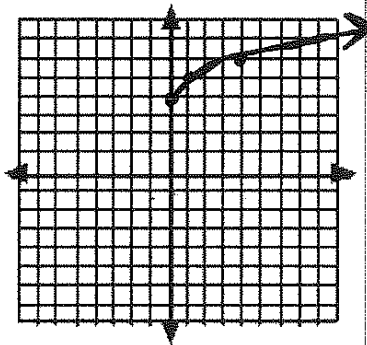
Square Root Function: *if a function contains the square root of a variable... this is a type of radical function*

Graph each function. State the domain and range.

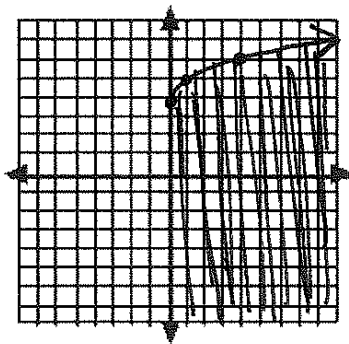
1. $f(x) = \sqrt{x} + 4$

$D = \{x \mid x \geq 0\}$ ← why ≥ 0 ?

$R = \{y \mid y \geq 4\}$ or $\{f(x) \mid f(x) \geq 4\}$



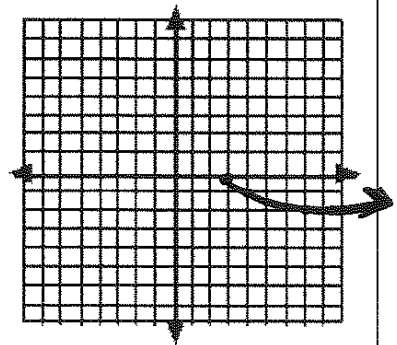
If the inequality were $f(x) \leq \sqrt{x} + 4$ you would shade below the curve



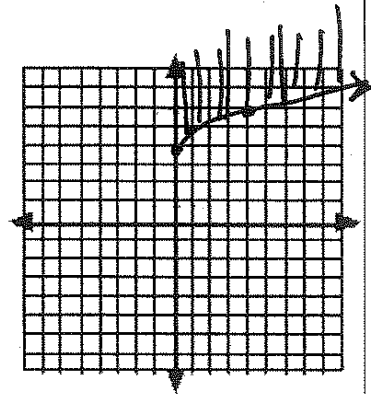
2. $f(x) = -2\sqrt{x-3}$

$D = \{x \mid x \geq 3\}$ why $x \geq 3$?

$R = \{y \mid y \leq 0\}$



If the inequality were $f(x) \geq -2\sqrt{x-3}$ you would shade above the curve



Note: A square root function is half of the inverse of a _____ function.

Make sure $\sqrt{\quad}$ is not over the 4.