

The domain of a radical function is all the  $x$ -values for which the radicand is not negative. That means  $x - 3 \geq 0$ , so the domain is  $x \geq 3$ . By definition, the square root symbol cannot have a negative value, so  $\sqrt{x - 3} \geq 0$ . If you multiply both sides by  $-1$  you get  $-\sqrt{x - 3} \leq 0$ . That means  $4 - \sqrt{x - 3} \leq 4$ . Therefore, the range is  $f(x) \leq 4$ .