

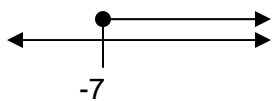
Domain Practice Problems – Square Roots

Find the domain of the following functions:

1. $f(x) = \sqrt{x+7}$

$$x + 7 \geq 0$$

$$x \frac{-7}{-7} \geq \frac{-7}{-7}$$



Domain: $x \geq -7$

2. $f(x) = \sqrt{6-x}$

$$6 - x \geq 0$$

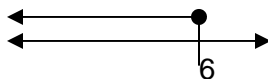
$$-6 \quad -6$$

$$\frac{-x}{-1} \geq \frac{-6}{-1}$$

$$-1 \quad -1$$

$$x \leq 6$$

Divide by -1
flip inequality sign



Domain: $x \leq 6$

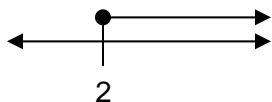
3. $f(x) = \sqrt{4x-8}$

$$4x - 8 \geq 0$$

$$\frac{+8}{+8} \quad \frac{+8}{+8}$$

$$\frac{4x}{4} \geq \frac{8}{4}$$

$$x \geq 2$$



Domain: $x \geq 2$

4. $f(x) = \sqrt{12-3x}$

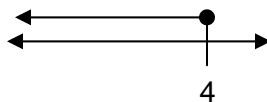
$$12 - 3x \geq 0$$

$$\frac{-12}{-12} \quad \frac{-12}{-12}$$

$$\frac{-3x}{-3} \geq \frac{-12}{-3}$$

$$x \leq 4$$

Divide by -3
flip inequality sign



Domain: $x \leq 4$