

10-5 Graphing Square Root Functions

Find the domain of each function:

1. $y = \sqrt{x-3}$

$$\begin{array}{r} x-3 \geq 0 \\ +3 \quad +3 \\ \hline x \geq 3 \end{array}$$

2. $y = \frac{1}{2}\sqrt{2x+8}$

$$\begin{array}{r} 2x+8 \geq 0 \\ -8 \quad - \\ \hline 2x \geq -8 \\ \frac{2x}{2} \geq \frac{-8}{2} \\ \hline x \geq -4 \end{array}$$

3. Given the square root function $y = -2\sqrt{x+4}$

$$\begin{array}{r} x+4 \geq 0 \\ -4 \quad - \\ \hline x \geq -4 \end{array}$$

a. Choose appropriate values for x and complete the table below (min 5 points):

→ Precision, round to appropriate

x	$y = -2\sqrt{x+4}$	y
-4	$y = -2\sqrt{-4+4}$	0
-3	$-2\sqrt{-3+4}$	-2
-2	$-2\sqrt{-2+4}$	-2.8
-1	$-2\sqrt{-1+4}$	-3.5
0	$-2\sqrt{0+4}$	-4
1	$-2\sqrt{1+4}$	-4.5
5	$-2\sqrt{5+4}$	-6

b. Use your points to graph the function. Graph accurately to the edge of the grid.

