

4-6 Relations and Functions

Use the graph to the right to answer questions 1-4:

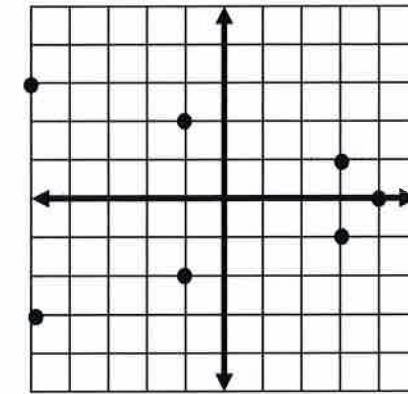
1. Give the domain: $\{-5, -1, 3, 4\}$ 2. Give the range: $\{-3, -2, -1, 0, 1, 2, 3\}$

3. Does the graph represent a function?

No.

4. Explain how you know the answer to #3.

It fails the vertical line test.
Some x-values have more than one y-value.

5. Find the range of the following function for the given domain. $y = -\sqrt{x+2}$ $D: \{-2, 2, 7\}$

$$\text{Range: } \{-3, -2, 0\}$$

$$\begin{aligned} y &= -\sqrt{-2+2} \\ &= -\sqrt{0} = 0 \\ y &= -\sqrt{2+2} \\ &= -\sqrt{4} = -2 \\ y &= -\sqrt{7+2} \\ &= -\sqrt{9} = -3 \end{aligned}$$