

Introduction to functions

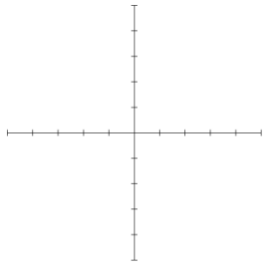
Domain:

Range:

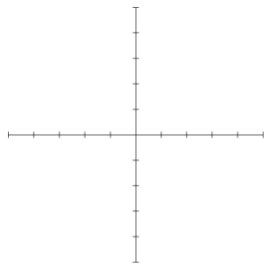
If you have a function, then for every value of _____ there is one value of _____. The test for this is the _____.

If you have a one-to-one equation, then for every value of _____ there is one value of _____. The test for this is the _____.

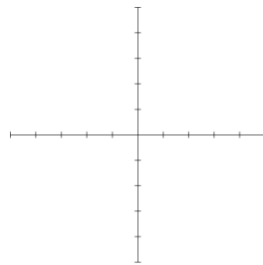
Draw a picture to fit the criteria given:



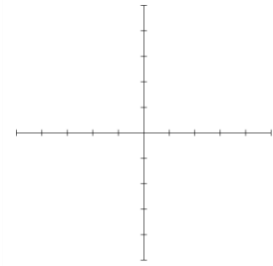
FUNCTION



ONE to ONE



BOTH



NEITHER

Determine the domain of the function.

1. $f(x) = -2x + 1$

2. $f(x) = 3x^2 + 1$

3. $f(x) = \frac{6}{x-5}$

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

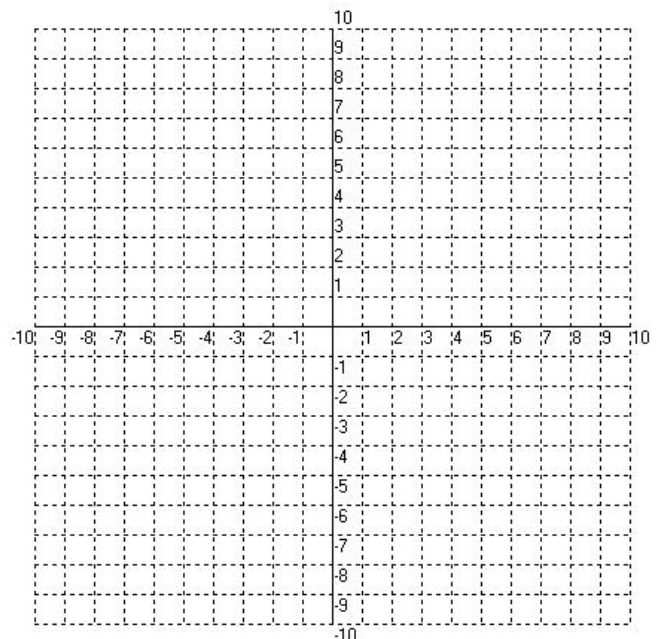
5. $f(x) = \frac{1}{\sqrt{x+5}}$

Graph Absolute Value problems – Make tables to help!

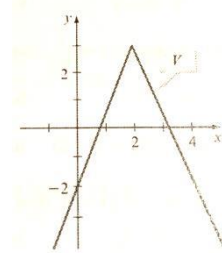
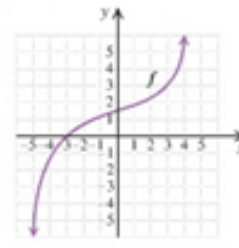
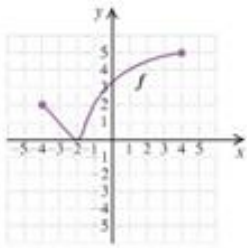
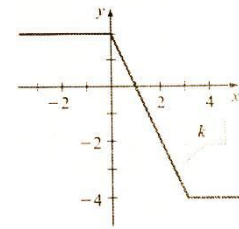
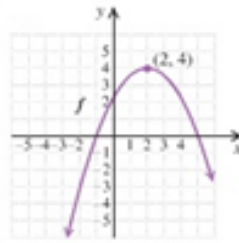
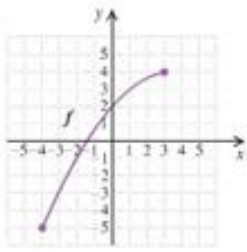
6. $y = |x|$

7. $y = |x| + 4$

8. $y = |x + 4|$

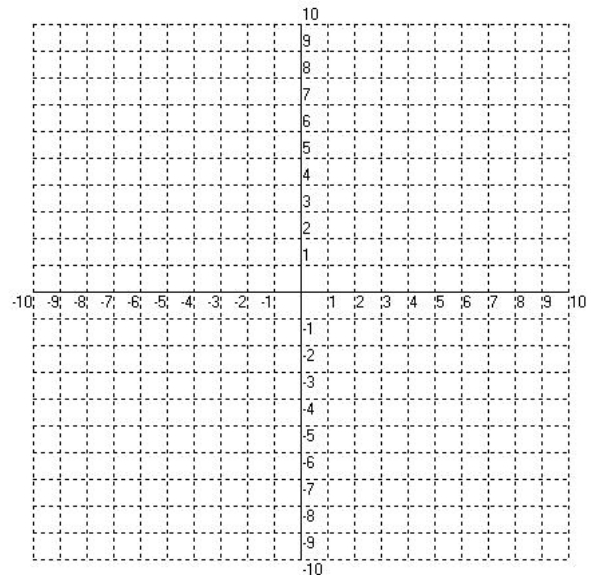


Use the indicated graph to identify the intervals over which the function is increasing, decreasing or constant. Use interval notation.



Graph Piece-wise functions

$$g(x) = \begin{cases} 2x, & x \leq -1 \\ \frac{x}{2}, & x > -1 \end{cases}$$



$$A(x) = \begin{cases} |x|, & x < 1 \\ x^2, & 1 \leq x < 3 \\ -x + 2, & x \geq 3 \end{cases}$$

