

Functions Practice Problems

1] If $g(x) = 5x - 10$, then at what value of x does the graph of $g(x)$ cross the x -axis?

2] For the function, $f(x) = \sqrt{x^2 - 1}$, which of the following values of x , make $f(x)$ undefined?

- a] -2 b] 0 c] 2 d] 1

3] If $2x + y = -3$ and $x + 2y = 18$, then $2x + 2y = ?$

4] In the xy -plane, if a point with coordinates (a, b) lies in the solution set of inequalities below, what is the maximum possible value of b ?

$$y \leq -10x + 2000$$

$$y \leq 40x$$

- a] 40 b] 160 c] 320 d] 1,600

5] In the system of linear equations below, 'a' is a constant. If the system has no solution, what is the value of 'a'?

$$\frac{1}{4}x - \frac{1}{2}y = 8$$

$$ax - 3y = 10$$

- a] $a = \frac{3}{2}$ b] $a = \frac{2}{3}$ c] $a = -\frac{2}{3}$ d] $a = -\frac{3}{2}$

6] Using graphing calculator find the solution set for

A] $x^2 + y^2 = 234$ and $x + y = 18$

B] $y = \frac{1}{2}x^2 + 3x - 2$ and $y = 4x - \frac{1}{2}$

7] If (x, y) is a solution to $x^2 + y^2 = 45$ and $y = -2x$ then what is value of y^2 ?