1. $x + y = 75$

The equation above relates the number of minutes, x, Maria spends running each day and the number of minutes, y, she spends biking each day. In the equation, what does the number 75 represent?

A) The number of minutes spent running each day

B) The number of minutes spent biking each day

C) The total number of minutes spent running and biking each day

D) The number of minutes spent biking for each minute spent running

2. Which of the following is equivalent to $3(x + 5) - 6$?

$3x + 15 - 6$

$3x + 9$

A) $3x - 3$

B) $3x - 1$

C) $3x + 9$

D) $15x - 6$

3. $x = y - 3$

$\frac{x}{2} + 2y = 6$

$2\left(\frac{y-3}{2} + 2y = 6\right)$

$y - 3 + 4y = 12$

$5y = 15$

$y = 3$

Which ordered pair (x, y) satisfies the system of equations above?

A) (-3, 0)

B) (0, 3)

C) (6, -3)

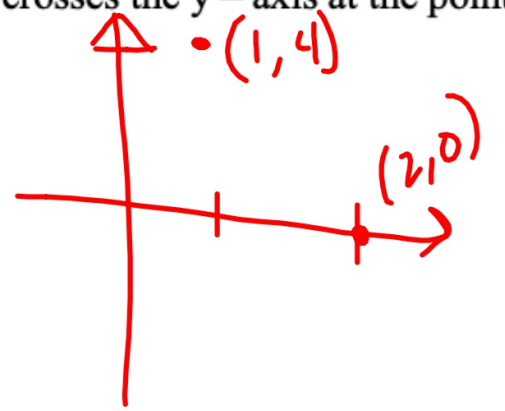
D) (36, -3)

4. If $2x + 8 = 16$, what is the value of $x + 4$?

$X = 4$

8

5. The graph of a line in the xy-plane passes through the point (1, 4) and crosses the x – axis at the point (2, 0). The line crosses the y – axis at the point (0, b). What is the value of b?



$m = \frac{y_2 - y_1}{x_2 - x_1} = \frac{-4}{1} = -4$

$y = -4x + b$

$0 = -4(2) + b$

$0 = -8 + b$

$b = 8$

6. If $a - b = 12$ and $\frac{b}{2} = 10$, what is the value of a + b?

$b = 20$ $\quad a - 20 = 12$

$a = 32$

A) 2

B) 12

C) 32

D) 52

7. $g(x) = 2x - 1$
$h(x) = 1 - g(x)$

The functions g and h are defined above. What is the value of h(0)?

A) -2

B) 0

C) 1

D) 2

$h(x) = 1 - (2x - 1)$

$h(x) = 1 - 2x + 1$

$h(x) = -2x + 2$

$h(0) = -2(0) + 2$

$0 + 2 = 2$

8. $2(-3x + 4y = 20)$
$6x + 3y = 15$

If (x, y) is the solution to the system of equations above, what is the value of x?

$-6x + 8y = 40$
$+6x + 3y = 15$
$11y = 55$
$y = 5$

$6x + 3(5) = 15$

$6x + 15 = 15$

$6x = 0$

$x = 0$