Name: _____

1. Solve the following equation:
$$\frac{x-4}{3} + 3 = \frac{x+6}{2} + x + 1$$
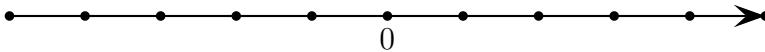
2. Solve the following equation:
$$\frac{2x-5}{3} - 3x = 2(x+5) + 10$$

3. Solve for y: $\quad 3x - 5y = 2$

4. Solve the following inequality:
$$2(4x - 1) - 3 \le 9x - 4$$

Give your answer in interval notation and graph it in the line below:

5. Seven more than the sum of two consecutive integers is 58. Find the two integers.

6. The width of a rectangle is one inch less than three times its length. The perimeter of the rectangle is 54 inches. Find the dimensions of the rectangle.
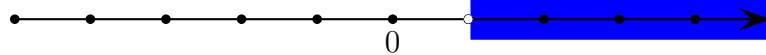
7. The solution to the inequality

$$-3x + 5 \geq 3(3 - 2x) - 10$$

is

A. $(-\infty, -2]$ B. $[-2, \infty)$ C. $[-1, \infty)$ D. $(\infty, -1]$

8. The following graph represents the solution to the inequality:

A. $x + 1 > 2$ B. $x + 1 < 2$ C. $x + 1 \geq 2$ D. $x + 1 \leq 2$

9. If $a - 2(a + 3) = -8$ then

A. $a = 3$ B. $a = 2$ C. $a = -2$ D. $a = -3$

10. Solving $\dfrac{2a - 3d}{c} = b$ for a gives:

A. $a = \dfrac{3d + bc}{2}$ B. $a = \dfrac{3d - bc}{2}$ C. $a = \dfrac{bc - 3d}{2}$ D. $a = \dfrac{bd - 3c}{2}$