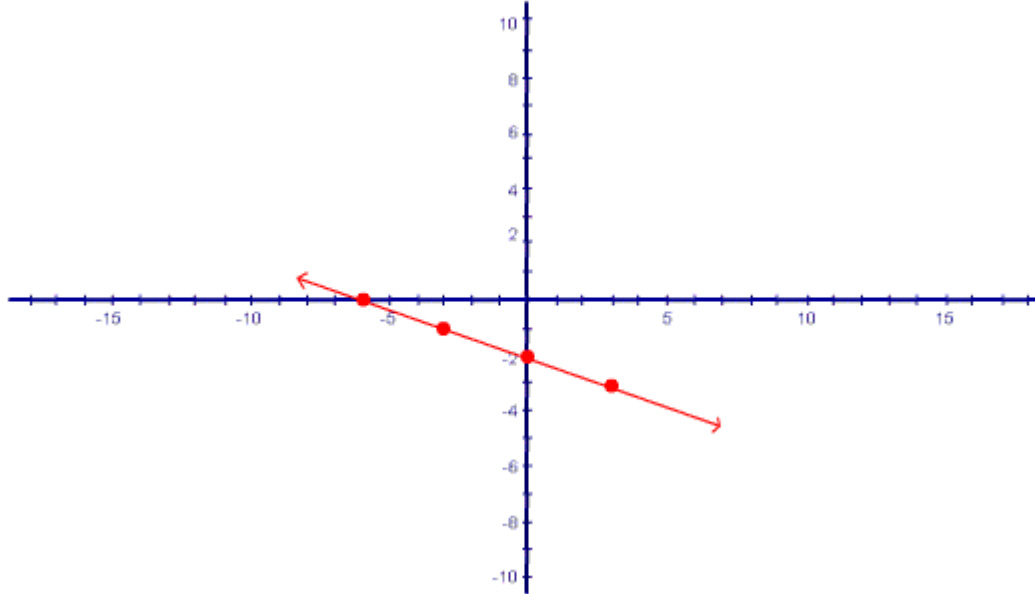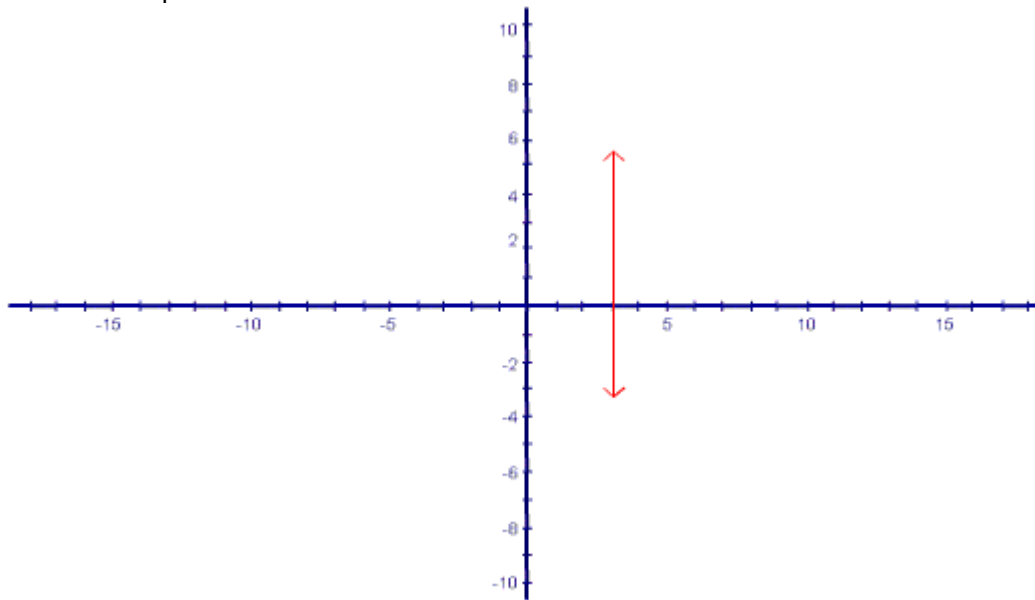**Geometry**
Writing Assignment: Writing Equations
Each problem is worth 5 points
Total Points: 50

Part I: Equations from Graphs.

1. Write the equation of the line below in slope intercept form.

2. Write an equation for the line below.

Part II: Point Slope Form

3. Write an equation of a line in <u>point slope form</u> that has a slope of -3 and passes through the point (3, -4).

4. Write the equation of a line in <u>point slope form</u> that has a slope of $-\dfrac{3}{4}$ and passes through the point (4, 5).

Part III: Slope Intercept Form

5. Write the equation of a line in <u>slope intercept form</u> that passes through (2, 4) and (5, 4).

6. Write the equation of a line in <u>slope intercept form</u> that passes through the points (-2, 7) and (3, 12)

Part IV: Parallel and Perpendicular Lines

7. Write an equation of a line in <u>slope intercept form</u> that is **parallel** to y = 3x+6 and passes through the point (-10, 2.5)

8. Write an equation of a line in <u>slope intercept form</u> that is **perpendicular** to y = -4x -2 and passes through the point (-16, -11).

9. Write an equation of a line in <u>slope intercept form</u> that is **parallel** to the line x + 4y = 6 and passes through (-8, 5).

10. Write an equation of a line in <u>slope intercept form</u> that is **perpendicular** to the line 2x -3y = 12 and passes through the point (2, 6).