Algebra 1 Quiz   11.22.13

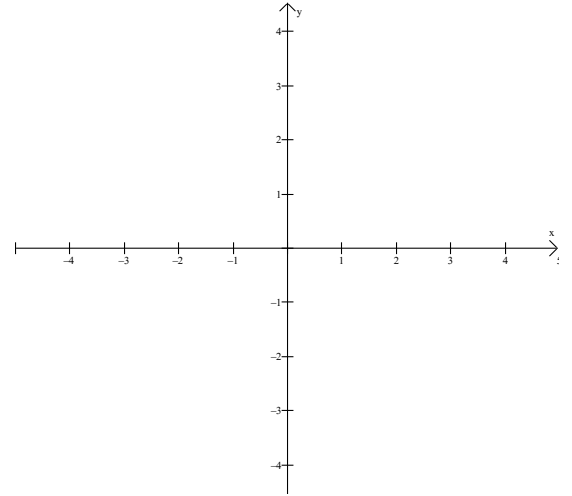Version B

Growth Guru _____

period_____

1) **Simplify:** $5(3x - 4) + 6(x - 2)$

2) **Graph the linear inequality**
$$4x - 2y > -8$$

3) **Solve the system of linear equations using *elimination***

$$4x - 4y = 8$$
$$3x - 2y = 12$$

4) **Simplify** $\left(\dfrac{-2xy^2}{6x^{-3}y^7}\right)^3$

5) **Perimeter Question:** A rectangle garden has a length of $4x - 7$ and a width of $2x + 4$ and a perimeter of 90 feet. What is the length and width of the garden to the nearest foot? (Draw a picture)

Bonus!! Population Growth: The current population of Russia is estimated at 143.5 million. The *10-year* growth rate shows the population decreasing by 3%. Using an exponential growth/decay model, what do you predict the population of Russia to be in 40 years? **Show all calculations!!!**