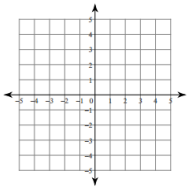
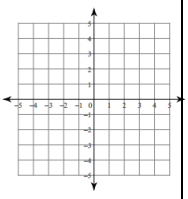
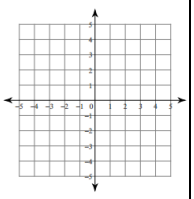
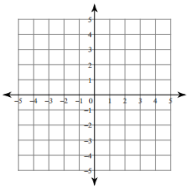
Name: _____ **Date:** _____

Class Assignment **Period:** _____

Due: _____

Solve each system by substitution and graph	**Solve each system by elimination and graph**
1. $y = -5$ $5x + 4y = -20$ (0, −5) 	3. $-8x - 10y = 24$ $6x + 5y = 2$ (7, −8) 
2. $x + 7y = 0$ $2x - 8y = 2$ (7, −1) 	4. $-24 - 8x = 12y$ $1 + \frac{5}{9}y = -\frac{7}{18}x$ (6,-6) 

5. The state fair is a popular field trip destination. This year the senior class at High School A and the senior class at High School B both planned trips there. The senior class at High School A rented and filled 8 vans and 8 buses with 240 students. High School B rented and filled 4 vans and 1 bus with 54 students. Every van had the same number of students in it as did the buses. Find the number of students in each van and in each bus. Van: 8, Bus: 22

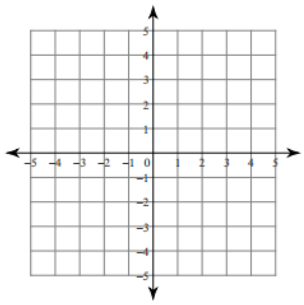
6. Brenda's school is selling tickets to a spring musical. On the first day of ticket sales the school sold 3 senior citizen tickets and 9 child tickets for a total of $75. The school took in $67 on the second day by selling 8 senior citizen tickets and 5 child tickets. What is the price each of one senior citizen ticket and one child ticket? Senior citizen ticket: $4, child ticket: $7

7. Matt and Ming are selling fruit for a school fundraiser. Customers can buy small boxes of oranges and large boxes of oranges. Matt sold 3 small boxes of oranges and 14 large boxes of oranges for a total of $203. Ming sold 11 small boxes of oranges and 11 large boxes of oranges for a total of $220. Find the cost each of one small box of oranges and one large box of oranges. Small box of oranges: $7, large box of oranges: $13

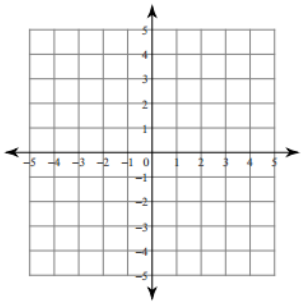
8. The school that Imani goes to is selling tickets to the annual dance competition. On the first day of ticket sales the school sold 3 senior citizen tickets and 3 child tickets for a total of $69. The school took in $91 on the second day by selling 5 senior citizen tickets and 3 child tickets. What is the price each of one senior citizen ticket and one child ticket? Senior citizen ticket: $11, child ticket: $12

Graph each systems of inequalities and justify your answer

9. $x + y \geq -3$
   $x + y \leq 3$



10. $x + y \geq 2$
    $4x + y \geq -1$



Critical thinking questions:

11. State one solution to the system. Justify your answer
    $y < 2x - 1$
    $y \geq 10 - x$

12. Write a system of inequalities whose solution is the set of all points in quadrant I not including the axes. Justify your answer.