**Name: Period: Job 15 Systems of Linear Inequalities**

**Part 1: Textbook**

Textbook Lesson 4-4 Pages 175-176: 16, 18, 20, 22

**Part 2: Algebra Regents Questions –**

1. On the set of axes below, graph the inequality $2x+y>1$



**2.** A gardener is planting two types of trees:

 Type *A* is three feet tall and grows at a rate of 15 inches per year.

 Type *B* is four feet tall and grows at a rate of 10 inches per year.

Algebraically determine exactly how many years it will take for these trees to be the same height.

*\*\*(hint: Must have the same units)*

3.Subtract $57+3x-19$ from $5x^{2}+6x-12$. Express the result as a trinomial.

4. Which graph shows a line where each value of $y$ is three more than half of $x$?



 **(1) (2) (3) (4)**

**5.** What is one point that lies in the solution set of the system of inequalities graphed below?

 (1) $\left(7, 0\right)$ (3) $\left(0,7\right)$

 (2) $(3, 0)$ (4) $(-3, 5)$

**6.** The Reel Good Cinema is conducting a mathematical study. In its theater, there are 200 seats. Adult tickets cost $12.50 and child tickets cost $6.25. The cinema's goal is to sell at least $1500 worth of tickets for the theater. Write a system of linear inequalities that can be used to find the possible combinations of adult tickets, *x*, and child tickets, *y*, that would satisfy the cinema's goal.

Graph the solution to this system of inequalities on the set of axes below. Label the solution with an *S*.

Marta claims that selling 30 adult tickets and 80 child tickets will result in meeting the cinema's goal. Explain whether she is correct or incorrect, based on the graph drawn