Write each inequality in standard form.

1. $y - 2 \leq x$

2. $-y \leq x - 3$

3. $-x - y > 5$

4. $x + 2y \geq 6$

5. $-2x + 3y < -6$

6. $2x + 5y \geq -20$

Write an inequality based on each given scenario, then solve the inequality by **graphing**.

1. You receive an $80 gift card to the bookstore. Hardback books cost $8 and paperback books cost $4. How many books of each type can you buy?

    <u>Inequality</u>   <u>Standard Form</u>

    Let x = _____

    Let y = _____

2. A catering company has small tables and large tables. Small tables seat 4 people and large tables seat 6. They are planning a party for 120 guests. How many of each size table can they use?

    <u>Inequality</u>   <u>Standard Form</u>

    Let x = _____

    Let y = _____

3. You and your friend have $14 among you to spend on snacks at the basketball game. If drinks are $2 and popcorn is $1, how many of each can you purchase?

    <u>Inequality</u>   <u>Standard Form</u>

    Let x = _____

    Let y = _____

4. Sam wants to purchase birthday gifts for his two sisters that share the same birthday. One sister likes daisies which cost $2 per stem and the other likes tulips which cost $3 per stem. If he has $12 to spend, how many of each could he buy?

    <u>Inequality</u>   <u>Standard Form</u>

    Let x = _____

    Let y = _____

5. The fair is in town and you have earned $50 from math tutoring and want to go. If each ride is $2.50 and each game is $2, how many of each can you participate in during your visit?

    <u>Inequality</u>   <u>Standard Form</u>

    Let x = _____

    Let y = _____

Solve each **system of inequalities** by graphing (Don't forget m = _____, b = _____ , solid or dotted, above or below). Mark your solution set with "S".

1. y ≥ -5x + 4   y > -2 | 2. y ≤ x - 3   -y ≤ x + 1

3. y > 4x – 5   y ≥ -2x + 3 | 4. y < -2   x ≥ 1

5. x + y ≥ -3   -x - y ≥ -3 | 6. 3x + y > -2   x ≤ 4 – 2y

Write a system of inequalities based on each given scenario.

	Inequality #1	Inequality #2
1. You can work at most 25 hours next week. You need to earn at least $90 to cover your gas and food expenses. Your babysitting job pays $7.50 per hour and your math tutoring job pays $6 per hour. Write a system of linear inequalities to model the situation and then solve. Let x = _____ Let y = _____		
2. Mandy is buying plants and soil for a flowerbed for her mom. The soil costs $5 per bag and the plants cost $12 each. She wants to buy at least 6 plants and can spend no more than $120. Write a system of linear inequalities to model the situation and then solve. Let x = _____ Let y = _____		
3. Josh is going to the store to buy candy. Bags of candy corn cost $3 and bags of chocolate cost $5. He needs to buy at least 20 bags of candy and he cannot spend more than $60. Write a system of linear inequalities to model the situation and then solve. Let x = _____ Let y = _____		
4. The band is selling boxes of fruit to raise money for new uniforms. Boxes of oranges cost $12 per box and boxes of grapefruits cost $15 per box. To get free shipping on all of the fruit each band member must sell at least 25 boxes of fruit. In order to meet your goal, you want to sell at least $600 worth of fruit. Write a system of linear inequalities to model the situation and then solve. Let x = _____ Let y = _____		