Solve the System using substitution.

1.	2.
$$4x + 3y = -8$$ $$-2x + y = -6$$	$$4x - 2y = 8$$ $$y = -2$$

Solve the system using elimination.

3.	4.
$$5x - 4y = 2$$ $$-5x + 3y = -9$$	$$-15x + 9y = 27$$ $$-5x - y = 17$$

Solve the system by graphing.

5.	6.
$$y = \frac{5}{7}x + 4$$ $$y = -\frac{1}{7}x - 2$$	$$x = 7$$ $$y = -x + 9$$
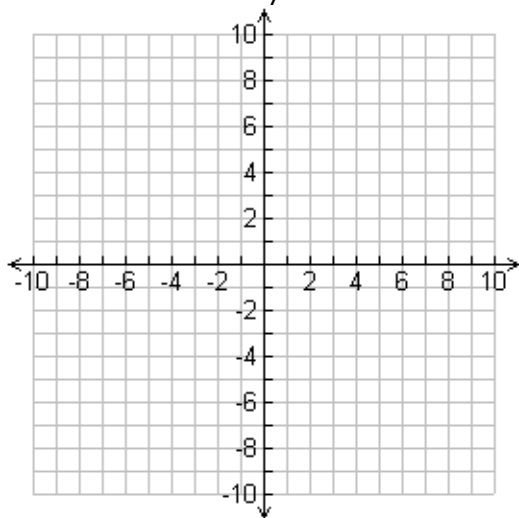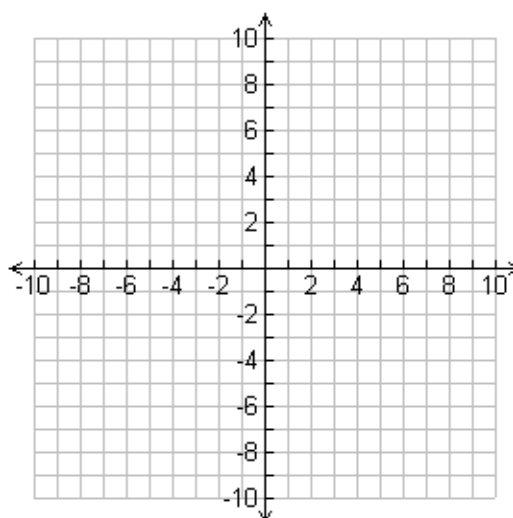
Solve the system using any method.

7.	8.
$$14x - 2y = 46$$ $$y = 7x - 23$$	$$5x + y = 8$$ $$-3x + 2y = -10$$

9.
$$-7x - 8y = -23$$
$$4x + 4y = 12$$

10.
$$-3x - 10y = -4$$
$$x - 5y = 18$$

11. Graph.
$$y \geq 3x - 6$$
$$y < 3x + 1$$
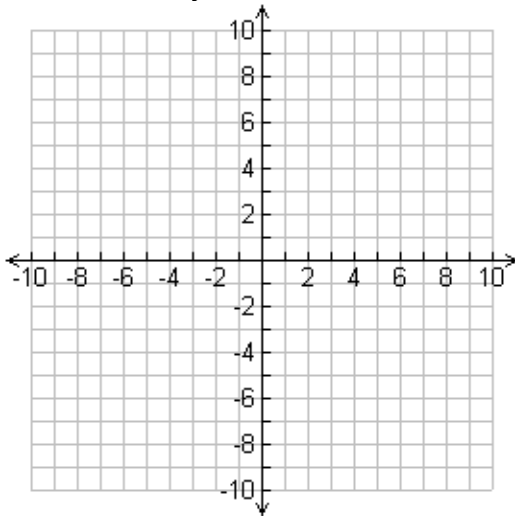
12. Graph.
$$x + 2y > 4$$
$$2x - y \geq 6$$
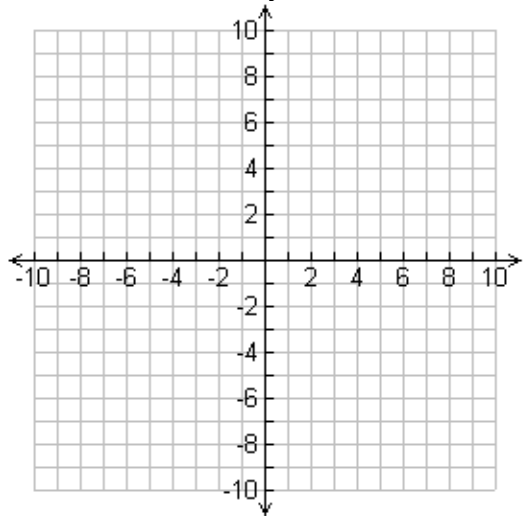
13. The school that Kayla goes to is selling tickets to the annual talent show. On the first day of ticket sales the school sold 6 senior citizen tickets and 7 student tickets for a total of $116. The school took in $26 on the second day by selling 4 senior citizen tickets and 1 student ticket. What is the price each of one senior citizen ticket and one student ticket

14. Natalie and Anjali each improved their yards by planting hostas and shrubs. They bought their supplies from the same store. Natalie spent $86 on 2 hostas and 7 shrubs. Anjali spent $104 on 8 hostas and 4 shrubs. Find the cost of one hosta and the cost of one shrub.

15. The senior classes at High School A and High School B planned separate trips to New York City. The senior class at High School A rented and filled 12 vans and 11 buses with 737 students. High School B rented and filled 6 vans and 5 buses with 341 students. Each van and each bus carried the same number of students. Find the number of students in each van and in each bus.

16. Jasmine and Brenda are selling cheesecakes for a school fundraiser. Customers can buy pecan cheesecakes and apple cheesecakes. Jasmine sold 2 pecan cheesecakes and 8 apple cheesecakes for a total of $146. Brenda sold 4 pecan cheesecakes and 7 apple cheesecakes for a total of $139. Find the cost each of one pecan cheesecake and one apple cheesecake.

17. Sarah is selling bracelets and earrings. The bracelets cost $2 each and earrings cost $4 each. She needs to make at least $40.

a) Write an inequality to represent the income from jewelry sales.

b) Graph the inequality.

c) Give a solution to your inequality and explain what it means.
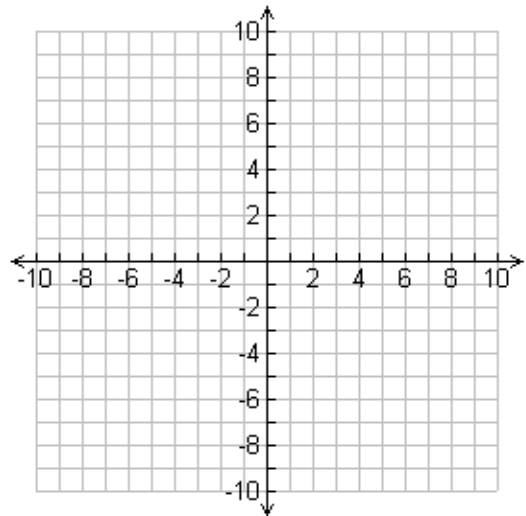
18. A vendor sells cotton candy(x) and sodas at baseball games(y). He knows he must buy twice as much cotton candy as sodas. He can buy sodas for $0.50 per can and cotton candy $1.00 per package. The vendor plans to spend no more than $250 buying both items for the next game.

a) Write two inequalities representing the information above.

b) Using the graph to the right, Which region represents the solution to the system of inequalities? A, B, C, or D?

Vendor Purchases