**Algebra 2** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Homework - Systems of Equations in 2-variables**

1. Solve the following systems by graphing.
2. x - y = - 2 2. x + y = - 3

x + y = 4 7x - y = - 3



Solution: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Solution:\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Solve the following systems by using **substitution**.
2. y = $\frac{1}{2}$ x -2 2. x + y = 1

-x - 6y = 4 2x + y = 5

1. Solve the following systems by using **elimination**.
2. -7x + 2y = 18 2. 7x + 2y = -19

6x + 6y = 0 -x + 2y = 21

1. Steve and Jack are planning a super bowl party. There are 90 people going to the party, and each person will be given one gift: t-shirt or a football. The t-shirt costs $12 each, and the football costs $16 each. The budget for the gifts is $1344.
2. Write an equation to represent the number of gifts given out.
3. Write an equation to represent the amount that the gifts will cost.
4. Solve the system algebraically
5. How many t-shirts will be given away? How many footballs?
6. Rafael’s DVD Rentals charges $4 a month for membership, plus $2 per movie rented. The Maeve Video store charges a flat of $10 per month for membership and movie rentals are free.
7. Which company will give you a better deal for renting one movie a month? How about 4 movies?
8. At how many movie rentals do the two companies cost the same amount?