**Math 10 – Systems Practice** Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\* This is due at the end of class!

Please be sure to check all of your solutions.

1. Solve the following systems of equations by **substitution** method (9.1).

a) $y=2x-1$ b) $x+6y=9$

 $y=-x+2$ $3x-2y=-13$

c) $3x-4y=-15$ d) $y=\frac{x}{3}+2$

 $5x+y=-2$ $3y+4x=21$

1. Solve the following systems of equations by **elimination** method (9.2).

a) $2x+3y=18$ b) $2y+8x=-20$

 $2x-3y=-6$ $2x-2y=-30$

c) $6x-3y=24$ d) $3x-y=1$

 $x+y=-2$ $-12x+4y=-4$

1. Write a system of equations for the following scenarios. Then solve using the method of your choice (graphing, substitution, or elimination).
2. Ms. Dobson bought 12 pairs of socks. Athletic socks cost $5 per pair and dress socks cost $7 per pair. She spent $70 in total.
3. The sum of two numbers is 65. The first number is 17 greater than the second number.

**ANSWERS: 1. a. (1,1) b. (-3,2) c. (-1,3) d. (3,3) 2. a. (3,4) b. (-5,10) c. (2,-4) d. no solution 3. a. dress = 5, athletic = 7 b. 24 and 41**

CHALLENGE! Determine the value for *k* that gives the system: a) no solution b) infinite solutions

 $4kx=y-2$

 $5x+3y-12=0$