Mastery Alg 1 SEMESTER 2 FINAL EXAM REVIEW #2 Name_____

1. The equation of line *m is* $2x-3y=6$. What is:

a) the slope ?

b) the y-intercept ?

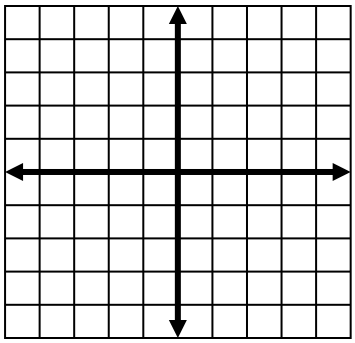
c) the x-intercept?

2. How many solutions does the linear system have?

$$\begin{cases} y=\frac{2}{3}x-1 \\ 6x-9y=9 \end{cases}$$

3. Graph the solutions:

$$\begin{cases} y<\frac{1}{2}x+2 \\ y\le -3x+3 \end{cases}$$



4. Write the set of equations that best represents the following problem (Do **NOT** solve):

"Nine pickles and two carrots cost $7.12. Four Pickles and five carrots cost $5.64. Find the cost of a pickle and the cost of a carrot."

5. Simplify:

$(3x^2-4x^3+2)-(2x^3+3x^2-8)$

6. Simplify: $\frac{12x^8y^2}{-14x^2y^7}$

7. Multiply and simplify:

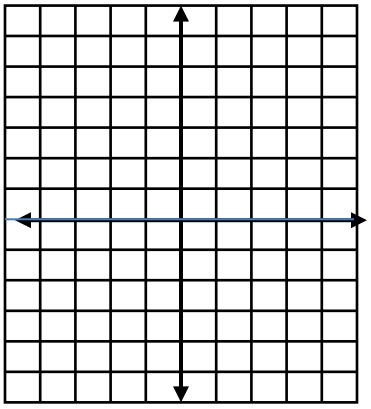
$(a-8)(a-4)$

8. Factor completely: x^2-x-12

.

9. Factor completely:

$10y^2-5y-15$

10. Solve $(3x-4)(x+5)=0$	11. What would you add to both sides to complete the square? $x^2-6x=15$	12. Solve $x^2+18=9x$
13. Solve the following compound inequality: $7 \le x+12 \ \ and \ \ x-2<-1$	14. Use the quadratic formula to solve: $x^2+6x+2=0$	15. A student has scores of 81, 87, 94, and 62. What score must the student earn on the fifth test in order to have an average score of 83?
16. Graph $y=x^2+2x-3$ 	17. How many times does the graph of $y=4x^2+2x+3$ intersect the *x*-axis?	18. The height of a rectangle is three more than twice the base. The area is 119 sq in. What is the height?