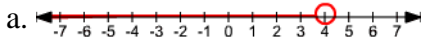
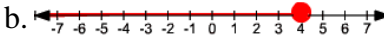
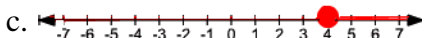
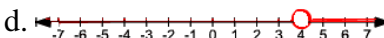


## Math A2 Homework: Week of September 24-28

### Monday, Sept 24

- Solve the systems of equations using the addition/elimination method and check.
  - $3x + 4y = 4$   
 $2x - 3y = 14$
  - $2x + 2y = 14$   
 $2y - 4x = -16$
- Solve the system of equations graphically and check.  
 $y = 2x - 3$   
 $y + 3x = 7$
- Solve for x:  $-2(x - 7) = 3x - 31$
- Solve for a:  $5a - bc = d$
- Expand in terms of x:  $(x + 3)(x - 4)$
- How old is Heather if her age 3 years from now will be twice her age five years ago?
- A rental car company charges \$35 for the first day plus  $x$  dollars for each additional day. If the cost for renting a car for a week is \$185, what is the cost for each additional day?

### Tuesday, Sept 25

- Solve the following system of equations using the substitution method and **check**.
  - $y = 2x - 3$   
 $y = x + 1$
  - $y - x = 6$   
 $y = 2x + 7$
  - $x + 2y = 1$   
 $x = y - 5$
- Solve the system of equations in part (a) of number one graphically. (Be sure your answers match)
- Solve the system of equations in part (b) of number one using the addition/elimination method.
- Solve the inequality and graph on a number line.  $7x - 3x - 9 < 2x + 5 + 4x$
- One less than five times a number is equal to  $-31$ . Find the number.
- (MULTIPLE CHOICE) Which number is in the solution set of the inequality  $5x + 3 > 38$ ?
  - 5
  - 6
  - 7
  - 8
- (MULTIPLE CHOICE) Which graph represents the solution of the inequality:  $-8x + 10 > -22$ 
  - 
  - 
  - 
  - 

### Wednesday, Sept 26

- Solve the following system of equations using the substitution method and check.
  - $3x + 2y = -8$   
 $y = 2x - 11$
  - $2x + 4y = -6$   
 $x = 3y + 7$
- Solve the following system of equations by using the elimination technique.  
 $4x + 5y = 23$   
 $4x - y = 5$
- Solve the following system of equations graphically:  
 $y = \frac{1}{2}x - 2$   
 $y - 4 = 2x$
- Solve for m:  $5m - 4 = 3(m + 2)$
- Solve and graph the solution set on a number line:  $4(x - 2) + 12 \geq 19 - x$
- Lois rented a car for \$74.00 a week plus \$0.14 for each mile the car is driven. What is the greatest number of miles Lois can drive the car if she wished to spend at most \$130.00?
- The top of Madison High School is in the shape of a rectangle and has a perimeter of 356 yards. If the length of the roof is  $(6x - 7)$  and the width is  $(3x + 5)$ , what are the dimensions of the roof? (In actual numbers, not in terms of  $x$ )

### Thursday, Sept 27

1. **SET UP** a system of equations only. **DO NOT SOLVE.**

On Friday, 100 total tickets were sold for the school play and a total of \$230 was collected. Regular tickets cost \$3 and student tickets cost \$2. How many of each kind were sold?

2. **SET UP AND SOLVE:** A fruit grower purchased 3 orange trees and 1 grapefruit tree for \$16. The next week at the same price, he bought 2 orange trees and three grapefruit trees for \$27. Find the price of one orange tree and one grapefruit tree.
3. One week, a business sold 40 scarves. White ones sold for \$4.95 and printed ones sold for \$7.95. In all, \$282 worth of scarves were sold. How many of each kind were sold?

4. Solve for  $v_1$ :  $A = \frac{v_1 - v_2}{t}$  (Hint: We are dividing by  $t$  so we must “undo” the division)

5. Solve the following systems using the indicated method:

a. Substitution:  $3y - 2x = 5$   
 $y - x = 1$

b. Graphing:  $y = 4x - 1$   
 $2y = -3x + 20$

6. Solve and graph on a number line:  $9 - 4x \leq 3x - 5$

### Friday, Sept 28

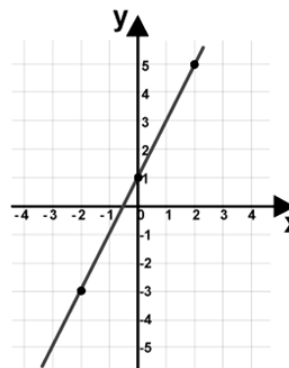
1. The sum of two numbers is 8. The difference between two numbers is 6. What are the two numbers?
2. Bon Jovi is holding a private benefit concert in which he is only selling 150 tickets. The first level seats are \$70 each, and the second level seats are \$50 each. If Bon Jovi raised a total of \$8,680, how many of each type of ticket did he sell?
3. Ms. Bracciodieta went shopping for her students and bought 5 packs of pens and 6 packs of mechanical pencils for \$31. When she handed everything out to her students, she realized she was short pens and pencils, so she went back to the store and bought 2 packs of pens and 4 packs of mechanical pencils and spent \$18. If all of the packs of pens were the same price, and all of the pencils were the same price, how much did a pack of pens cost? How much did a pack of pencils cost? (Pens and pencils cost different amounts)

4. Solve the following systems of equations using the indicated method:

a. Substitution:  $y = x - 7$   
 $y = 3x - 15$

b. Graphing:  $y = x + 1$   
 $y = -2x + 10$

5. Write the equation of the line shown in the following graph:



### Study for test on Tuesday October 2

Topics Include: Equations (Literal, Fractional, Regular), Inequalities (solving and graphing on a number line), Systems of Equations (Graphing, Substitution, Addition/Elimination, Word Problems), and any review topic seen on the past 3 homework sheets.