Week 20: 1/11-1/15　　　Math I　　　　　Due: 1/19

Objectives:
1. To choose the best method for solving systems of linear equations.
2. To apply systems of equations to the real-world.
3. To graph linear inequalities in two variables.
4. To use linear inequalities when modeling real-world situations.
5. To solve systems of linear inequalities by graphing.
6. To model real-world situations using systems of linear inequalities.

Monday:
In Class:
Section 4-4: Notes in composition books
Systems of equations word problems handout attached.
Homework:
Section 4-4: #7-10, 13-16, 19-23
-Finish any classwork not completed in class.
-Go to text website: www.pearsonsuccessnet.com
Click on section 4-5 and WATCH online problems 1-5 and complete "Got It's" that follow
THESE WILL BE CHECKED TOMORROW AND POINTS WILL BE DEDUCTED IF NOT COMPLETE.

Tuesday:
In Class:
Section 4-5: #1-11
Homework:
Section 4-5: #12-17, 19-22

Wednesday:
Go to text website: www.pearsonsuccessnet.com
Click on section 4-6 and WATCH online problems 1-3 and complete "Got It's" that follow.
THESE WILL BE CHECKED TOMORROW AND POINTS WILL BE DEDUCTED IF NOT COMPLETE.

Thursday:
In Class:
Section 4-6: #1-9
Homework:
Section 4-6: #10-14, 16-20

Friday:
Complete Kuta Software Handout attached on graphing linear and systems of linear inequalities. THIS HANDOUT WILL COUNT AS A QUIZ GRADE. IT IS OPEN BOOK/OPEN NOTE.
***No school on Monday. MLK Day. This packet will be turned in Tuesday.

Slope-Intercept Linear System   Name: _____

Real World Problems   Date: _____

Complete the following sentences:

- The slope intercept form is _____

- In the real world slope, m, means _____ and the $y-$

  intercept, b, means _____.

1. Wendy is starting a catering business and is attempting to figure out who she should be using to transport the food to different locations. She has found two trucking companies that are willing to make sure her food arrives intact. Peter's Pick Up charges $0.40 per mile and charges a flat fee of $68. Helen's Haulers charges $0.65 per mile and charges a flat fee of $23.

   - Define your variables.

   - Write a system of equations to model the above situation.

   - For what distance would the cost of transporting to the produce be the same for both companies? What is that equal cost? Use mathematics to explain how you determined your answer. Use words, symbols or both in your explanation.

   - Which company charges a lower fee for a 160 mile trip? Use mathematics to justify your answer.

   - Which company will move a greater distance for $200? Use mathematics to justify your answer.

2. Jonas needs a cell phone. He has a choice between two companies with the following monthly billing policies. Each company's monthly billing policy has an initial operating fee and charge per minute.

	Operating Fee	Charge per Minute
Terri's Telephone	29.95	0.14
Carrie's Connection	4.95	0.39

- Define your variables.

- Write a system of equations to model the above situation.

- At how many minutes is the monthly cost the same? What is the equal monthly cost of the two plans? Use mathematics to explain how you determined your answer. Use words, symbols, or both in your explanation.

- Which plan costs more 150 minutes of calls each month? Use mathematics to justify your answer.

- Which plan provides more minutes for $ 60.00? Use mathematics to justify your answer.

If you felt as though you got #1 and 2 correct, go to Problem #4.
**If you feel as though you need extra help go to Question 3 and do not complete**
Question #4.

3. Movies Are Us has two video rental plans. The Regular video rental plan charges $ 3.25 for each video rental. The Preferred video rental plan has an $ 8.75 membership fee and charges $ 2 for each video rental.

    - Define your variables.

    - Write a system of equations to model the above situation.

    - How many video rentals give the two plans the same cost? What is the equal cost? Use mathematics to explain how you determined your answer. Use words, symbols or both in your explanation.

    - Which video plan costs more for 18 video rentals? Use mathematics to justify your answer.

    - Which plan provides more videos for $ 30.00? Use mathematics to justify your answer

4. Instead of completing another problem, be creative and write your own scenario. Be sure to give your solution as well. (Hint: The easiest way to come up with this is to determine your answer first.)
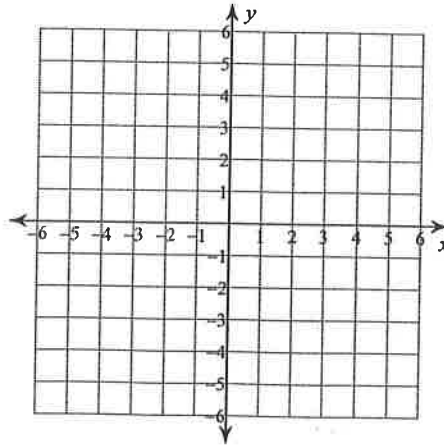
Friday - Quiz

Graphing Linear Inequalities

Date_____ Period____

Sketch the graph of each linear inequality.
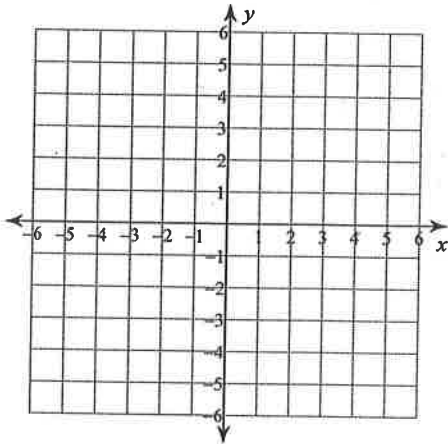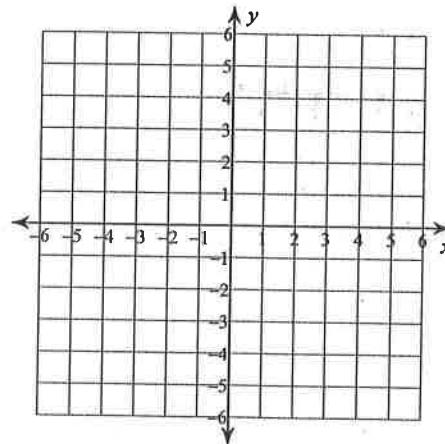
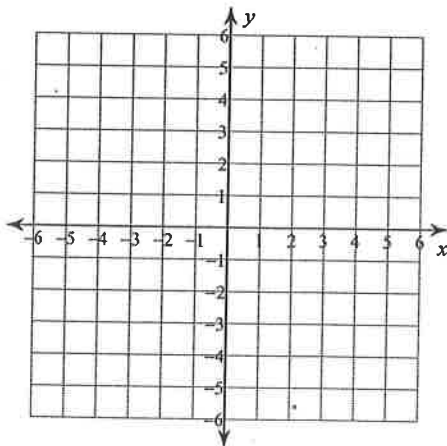1) $y \geq -3x + 4$
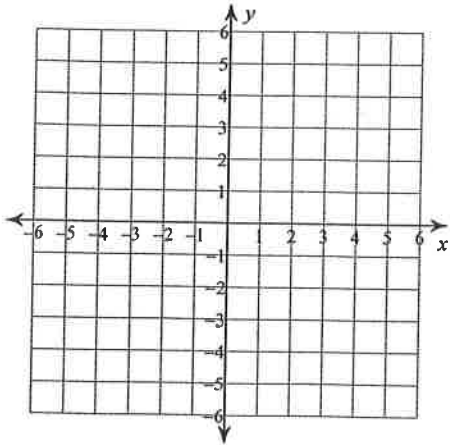
2) $y \leq \frac{3}{5}x - 5$

3) $y > -x - 5$

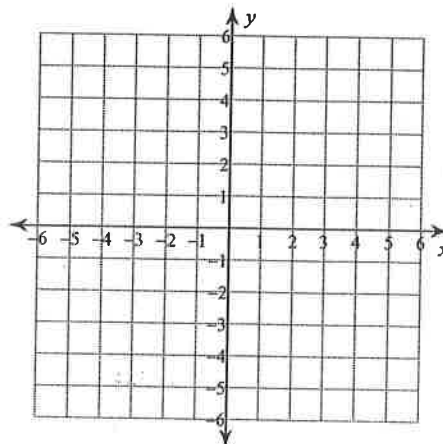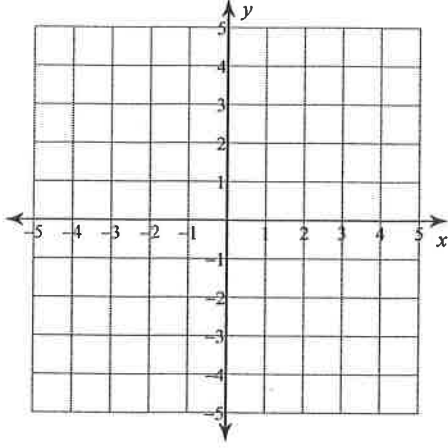4) $y > -4$

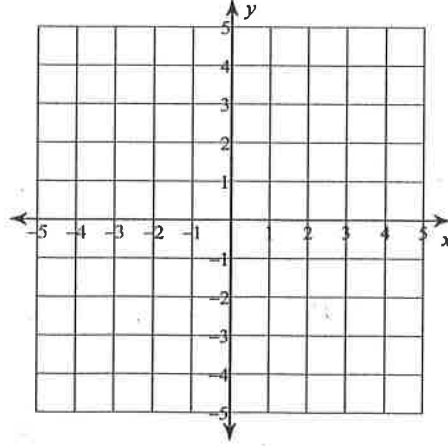5) $y > 2x - 5$

6) $y \geq \frac{7}{4}x + 2$

Friday - Quiz

Name_____

Solving Systems of Inequalities

Date_____ Period____

Sketch the solution to each system of inequalities.
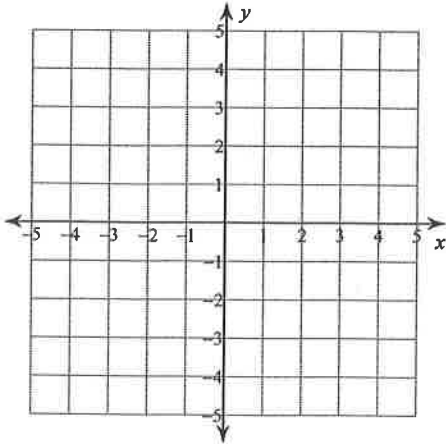
1) $y \le -x - 2$
   $y \ge -5x + 2$

2) $y > -x - 2$
   $y < -5x + 2$

3) $y \le \frac{1}{2}x + 2$
   $y < -2x - 3$

4) $x \le -3$
   $y < \frac{5}{3}x + 2$