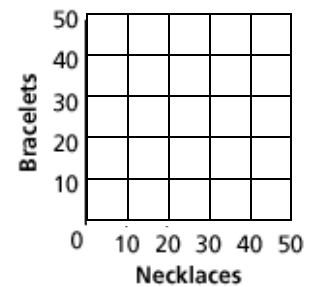


Name _____

Date _____ Pd. _____

Notes: Graphing Systems of Linear Inequalities Day 3*Example*

BUSINESS AAA Gem Company produces necklaces and bracelets. In a 40-hour week, the company has 400 gems to use. A necklace requires 40 gems and a bracelet requires 10 gems. It takes 2 hours to produce a necklace and a bracelet requires one hour. How many of each type can be produced in a week?



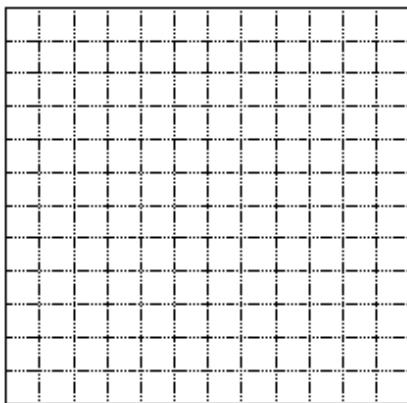
Name _____

Date _____ Pd. _____

Exit Card: Graphing Systems of Linear Inequalities Day 3**ECR**

Suppose you have two jobs, one at a grocery store earning \$4 per hour and another at a restaurant earning \$5 per hour. You cannot work more than 12 hours each week. You wish to earn at least \$40 each week.

- Define two variables for the number of hours you work at each job. Write a system of inequalities representing this situation.
- Graph the system of inequalities, clearly indicating the region that is the solution to the system.
- Give one solution that tells how many hours can be worked at each job to make at least \$40 each week, working no more than 12 hours. Use mathematics to justify your answer.

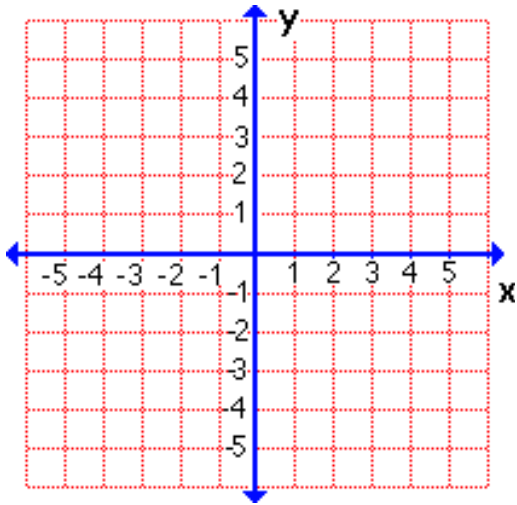


Name _____

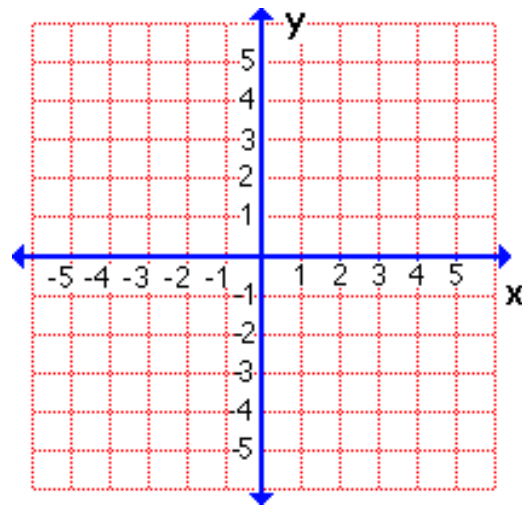
Date _____ Pd. _____

Homework: Pages 397 – 398 (23, 24, 33, 34, 39, 40)

23. Graph solution of $\begin{cases} x + y > 4 \\ -2x + 3y < -12 \end{cases}$



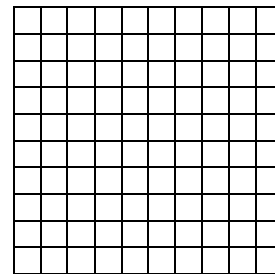
24. Graph solution of $\begin{cases} 2x + y \geq -4 \\ -5x + 2y < 1 \end{cases}$



The Natural Wood Company has machines that sand and varnish desks and tables. The table gives the time requirements of the machines.

| Machine | Hours per Desk | Hours per Table | Total Hours Available each Week |
|------------|----------------|-----------------|---------------------------------|
| Sanding | 2 | 1.5 | 31 |
| Varnishing | 1.5 | 1 | 22 |

33. Make a graph showing the number of desks and the number of tables that can be made in a week.



34. List three possible solutions.

39. Which ordered pair does not satisfy the system $x + 2y > 5$ and $3x - y < -2$?

A $(-3, 7)$

B $(0, 5)$

C $(-1, 4)$

D $(0, 2.5)$

40. Which system of inequalities is represented by the graph?

A
$$\begin{cases} y \leq 2x + 2 \\ y > -x - 1 \end{cases}$$

B
$$\begin{cases} y \geq 2x + 2 \\ y < -x - 1 \end{cases}$$

C
$$\begin{cases} y < 2x + 2 \\ y \leq -x - 1 \end{cases}$$

D
$$\begin{cases} y > 2x + 2 \\ y \leq -x - 1 \end{cases}$$

