

Chapter 3 Test

Form A

(Page 1 of 3 pages)

Name _____

Date _____

Use a straight edge to draw straight lines.

1. Are there none, one, or many solutions to the system?

$$\begin{cases} x - 4y = 2 \\ 2x - 8y = 5 \end{cases}$$

1. _____

2. Is $(5, -2)$ a solution of the system?

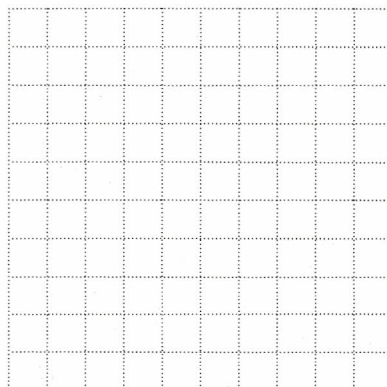
$$\begin{cases} 2x + 6y = -2 \\ x + 2y = 1 \end{cases}$$

2. _____

3. Sketch the graph of the system.

Estimate the solution.

$$\begin{cases} 2x - 3y + 6 = 0 \\ 5x - 2y - 7 = 0 \end{cases}$$



3. _____
Use graph at left.

4. **Theater Tickets** 1500 theater tickets were sold for a performance. General admission was \$12 but student rates offered a 50% discount. Box office receipts totaled \$16,200. How many students attended?

4. _____



5. Solve the system.

$$\begin{cases} y = -4x + 4 \\ y = -x - 5 \end{cases}$$

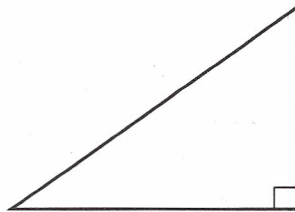
5. _____

6. Solve the linear system.

$$\begin{cases} 4x - 3y = -1 \\ 3x + 4y = -3 \end{cases}$$

6. _____

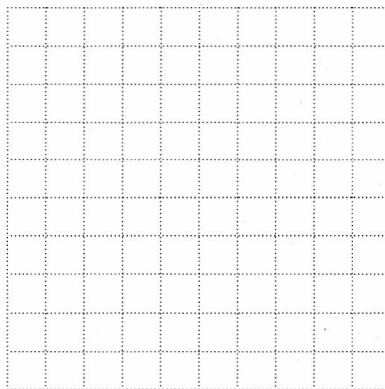
7. **Geometry** The measures of the two acute angles of a right triangle differ by 19° . What are their measures?



7. _____

8. Sketch the graph of the system of linear inequalities.

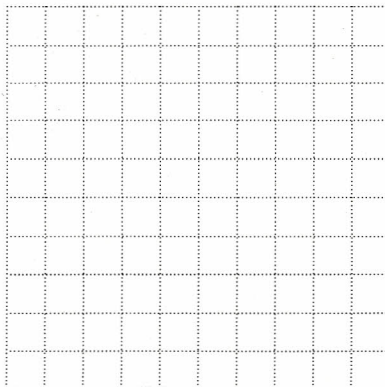
$$\begin{cases} x > -3 \\ y \geq 1 \end{cases}$$



8. Use graph at left.

9. Sketch the graph of the system described.

“ x and y are each greater than -3 but not greater than 2 .”



9. Use graph at left.

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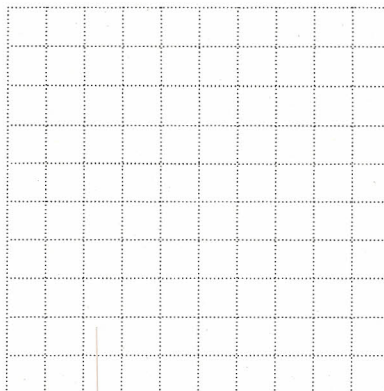
(Page 3 of 3 pages)

Name _____

10. Sketch the graph of the system of linear inequalities.

$$\begin{cases} y \leq \frac{1}{2}x + 2 \\ y \geq -\frac{1}{2}x - 2 \\ x \leq 3 \end{cases}$$

Label the vertices.



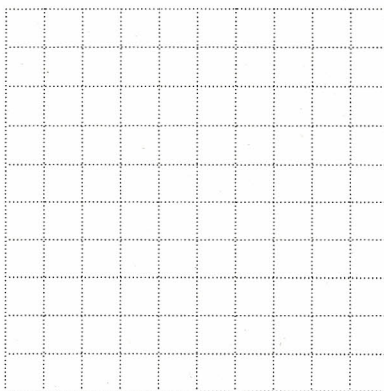
10. Use graph at left.

11. Find the *maximum* value of C under the constraints.

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

Constraints:

$$\begin{cases} x \geq -4 \\ x \leq 3 \\ y \geq -1 \\ y \leq 2 \end{cases}$$



11. Use graph at left.

12. Solve the linear system.

$$\begin{cases} x + 2y - 4z = -12 \\ -x + z = 1 \\ x + y + z = 4 \end{cases}$$

12. _____