

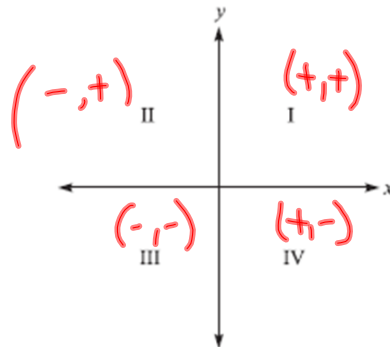
16. What expression must the center cell of the table below contain so that the sums of each row and each column are equivalent?

| | | | |
|-------|-------|-------|-------|
| $-4x$ | $9x$ | $2x$ | $=7x$ |
| $7x$ | $3x$ | $-3x$ | |
| $4x$ | $-5x$ | $8x$ | |



- F. $5x$
 G. $3x$
 H. 0
 J. $-x$
 K. $-4x$

17. Point A is to be graphed in a quadrant, not on an axis, of the standard (x,y) coordinate plane below. If the x -coordinate and the y -coordinate of point A are to have the same signs, then point A must be located in:



- A. Quadrant I only
 B. Quadrant II only
 C. Quadrant III only
 D. Quadrant I or II only
 E. Quadrant I or III only

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18. Reggie knows how to make 5 different entrees, 4 different side dishes, and 6 different desserts. How many distinct complete meals, each consisting of an entrée, a side dish, and a dessert, can Reggie make?

- F. 16
 G. 26
 H. 72
 J. 120
 K. 144

$$5 \cdot 4 \cdot 6 = 20 \cdot 6 = 120$$

19. At a bottling plant, 10,000 liters of carbonated water are needed to produce 3,000 bottles of soda. How many liters of carbonated water are needed to produce 750 bottles of soda?

- A. 225
 B. 1,500
 C. 2,500
 D. 4,000
 E. 5,000

$$\begin{array}{r} 10,000 \\ \hline 3,000 \end{array} \times \frac{x}{750}$$

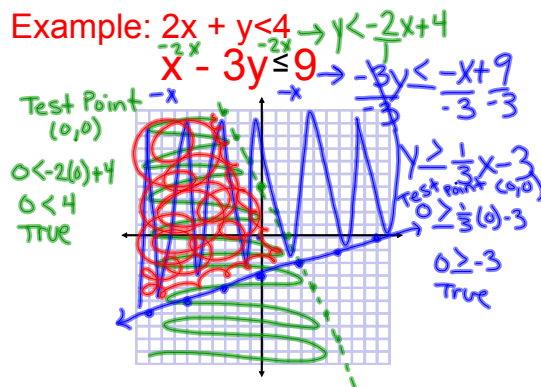
$$3,000x = 7,500,000$$

$$\frac{3,000x}{3,000} = \frac{7,500,000}{3,000}$$

$$x = 2,500$$

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1. Graph the lines: Solve for y to plot the points (o, b), then the slope.
 $y = mx + b$
2. Determine if the lines are solid or dotted?
Solid if \leq or \geq Dotted if $>$ or $<$
3. Shade above or below?
 \geq or $>$ shade above
 \leq or $<$ shade below
4. The overlapping area is the solution to the system of inequalities.



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Graph the system: $x + 2y > 4$

$$\frac{2y}{2} > \frac{-x+4}{2}$$

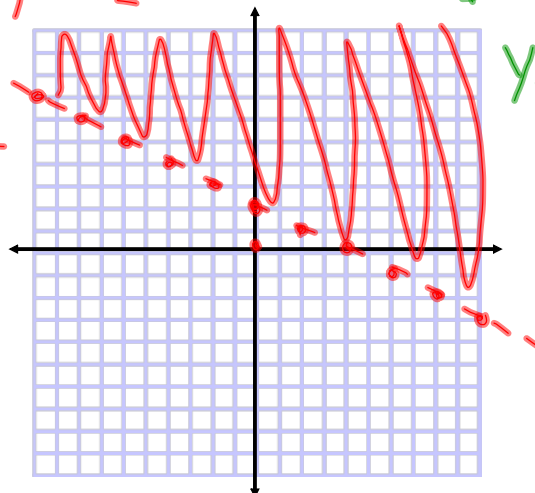
$$y > -\frac{1}{2}x + 2$$

$$\frac{2x - 3y \leq -6}{-2x} \quad \frac{-2x}{-2x}$$

$$\frac{-3y \leq -2x - 6}{-3} \quad \frac{-2x}{-3} \quad \frac{-6}{-3}$$

$$y \geq \frac{2}{3}x + 2$$

Test Point (0,0)
 $0 > -\frac{1}{2}(0) + 2$
 $0 > 0 + 2$
 $0 > 2$
False



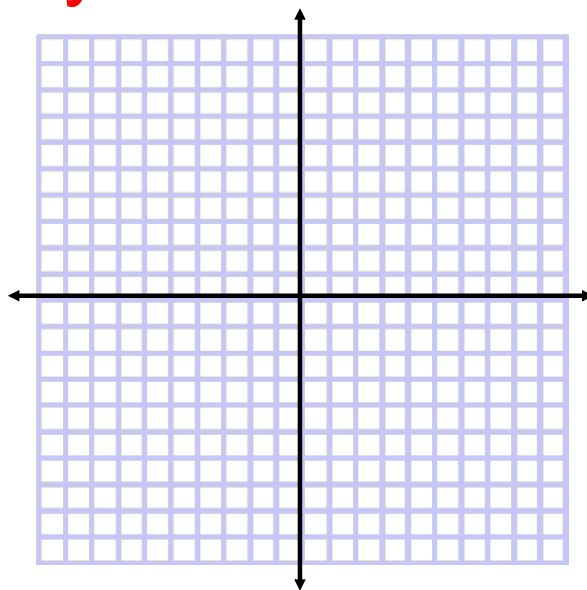
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Example 2 (page 77):

Graph the system

$$x < 3$$

$$y \geq -1$$



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