

Algebra 1

Chapter 6

Section 6-6

Jan 1-11:23 AM

You are buying paperback and hardcover books at a book sale. You can spend at most \$20. Your told a friend that you would buy a book for them. List three possible combinations of books that you can buy.

Paperback
\$2.00

Hardcover
\$4.00



$$\begin{aligned}3h, 2p &= \$16 \\0h, 10p &= \$20 \\4h, 2p &= \$20 \\3h, 3p &= \$18\end{aligned}$$

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You are buying paperback and hardcover books at a book sale. You can spend at most \$20. You told a friend that you would buy a book for them. Write all inequalities that describe the situation.



$$2p + 4h \leq 20$$

$$p + h \geq 1$$

$$p \geq 0$$

$$h \geq 0$$

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Review: Graphing an Inequality:

$$y - x \geq 2$$

Graph:

$$y - x = 2$$

$$x=0$$

$$y=0$$

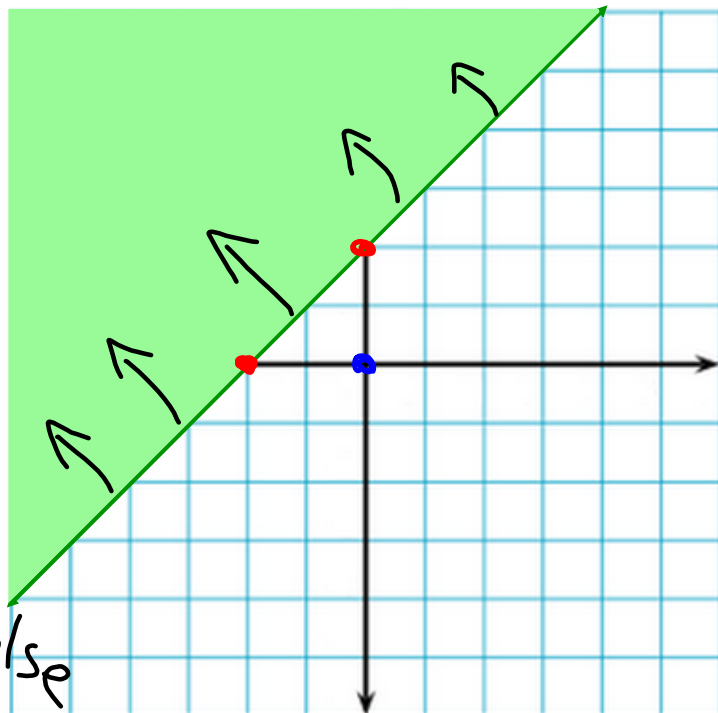
$$y=2$$

$$x=-2$$

$$0 - 0 \geq 2$$

$$0 \geq 2$$

False



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Graph the Inequalities:

$$y \leq 4x - 2$$

$$y > \frac{1}{3}x + 3$$

Graph:

$$y = 4x - 2$$

$$0 \leq 4(0) - 2$$

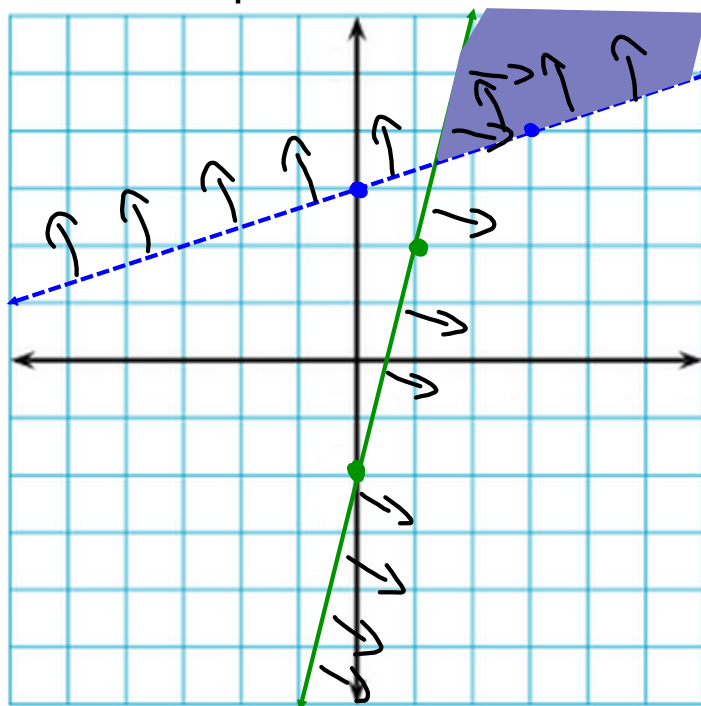
$$0 \leq -2$$

Graph:

$$y = \frac{1}{3}x + 3$$

$$0 > \frac{1}{3}(0) + 3$$

$$0 > 3$$



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Graph the Inequalities:

$$y < x - 3$$

$$y < \frac{7}{4}x - 5$$

Graph:

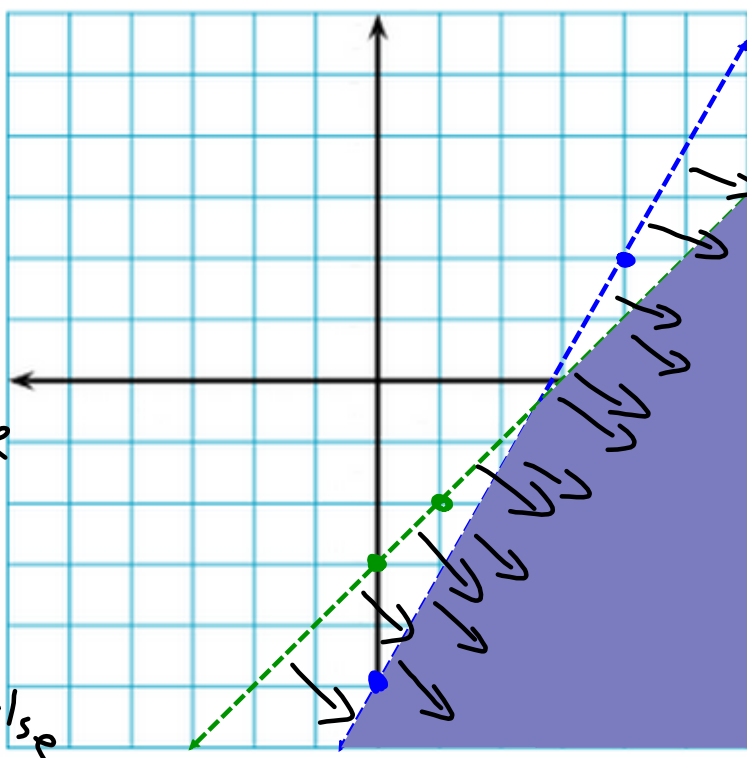
$$y = 1x - 3$$

$$0 < 0 - 3 \quad \text{False}$$

Graph:

$$y = \frac{7}{4}x - 5$$

$$0 < \frac{7}{4}(0) - 5 \quad \text{False}$$



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Graph the Inequalities:

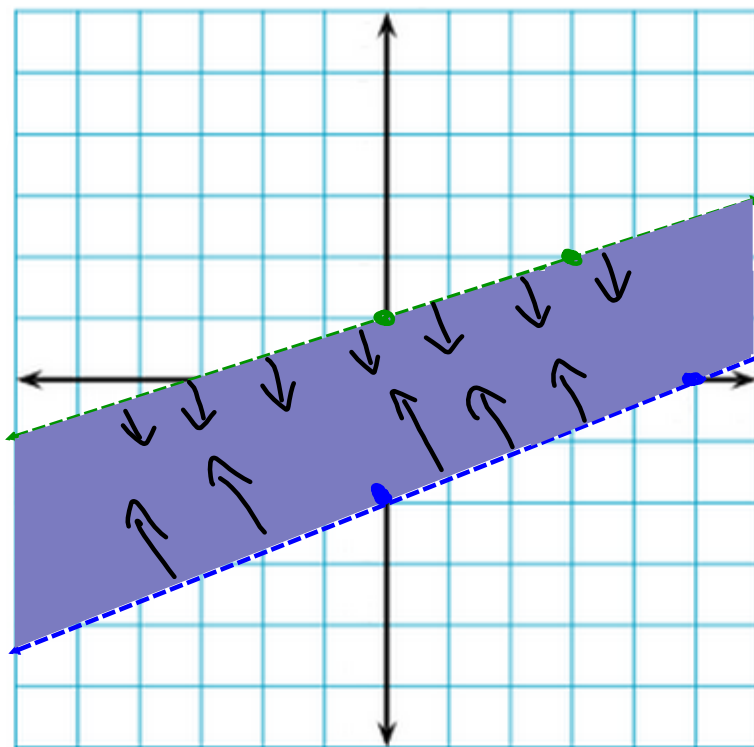
$$y < \frac{1}{3}x + 1$$

$$y > \frac{2}{5}x - 2$$

$$0 < \frac{1}{3}(0) + 1$$

$$0 > \frac{2}{5}(0) - 2$$

$$0 > -2$$



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You are buying paperback and hardcover books at a book sale. You can spend at most \$20. Graph the inequalities that describe the situation.



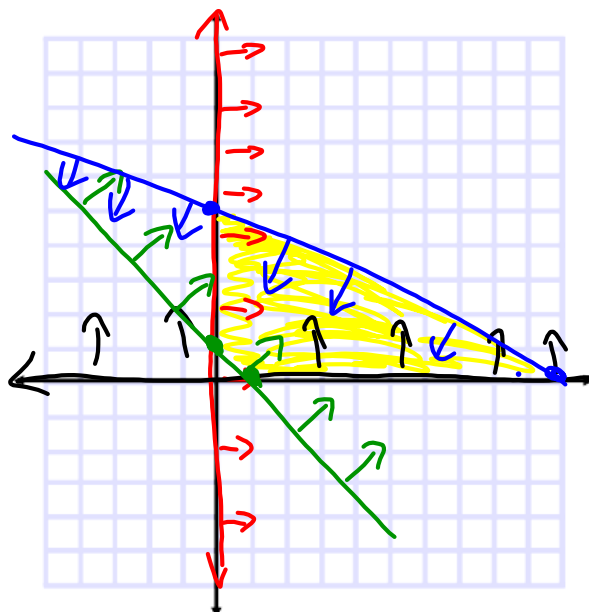
$$2x + 4y \leq 20$$

$$* x \geq 0 \quad \begin{matrix} x=0 & y=0 \\ y=5 & x=10 \end{matrix}$$

$$* y \geq 0$$

$$* x + y \geq 1$$

$$\begin{matrix} x=0 & y=0 \\ y=1 & x=1 \\ 0+0 \geq 1 \end{matrix}$$



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