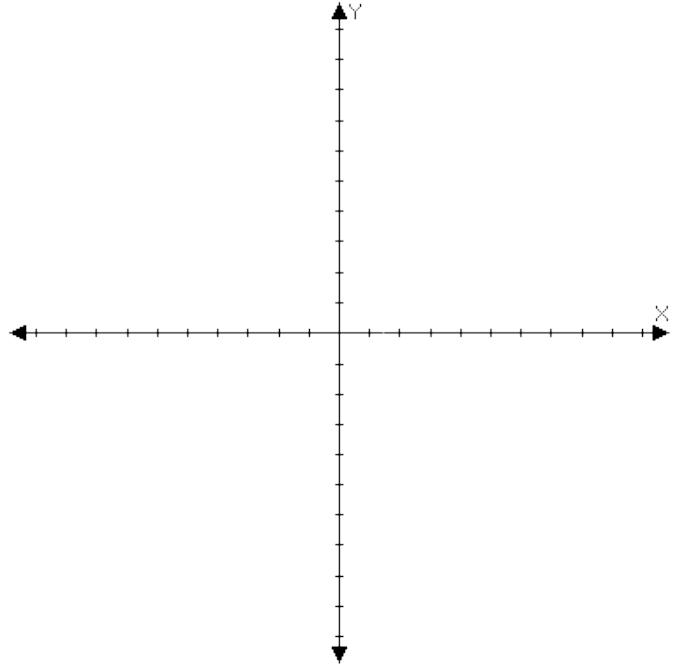


## Review Exercise Set 10

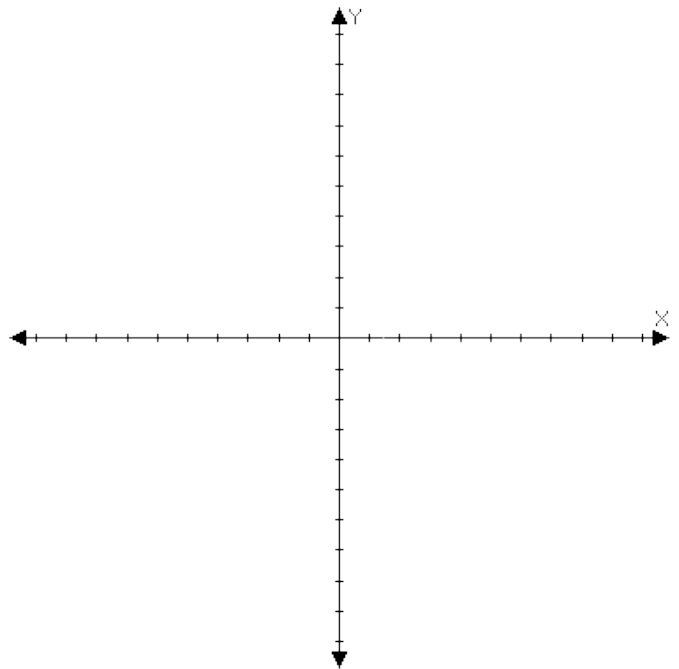
Exercise 1: Graph the given linear inequality.

$$x > -4$$



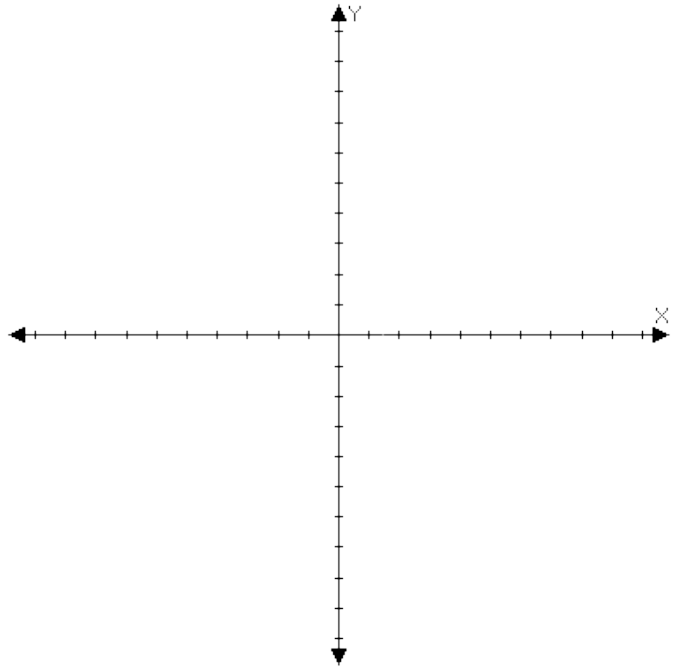
Exercise 2: Graph the given linear inequality.

$$2x < 3y + 12$$



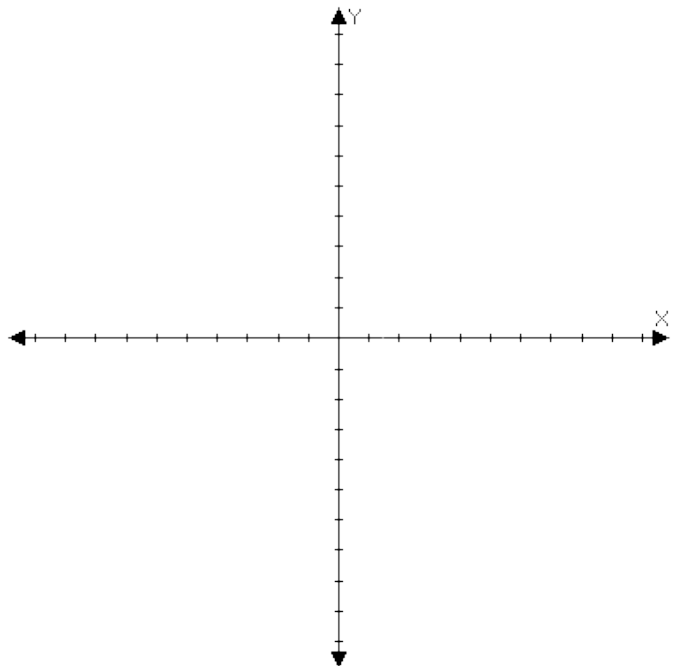
Exercise 3: Graph the given linear inequality.

$$-2x + 3y \geq 6$$



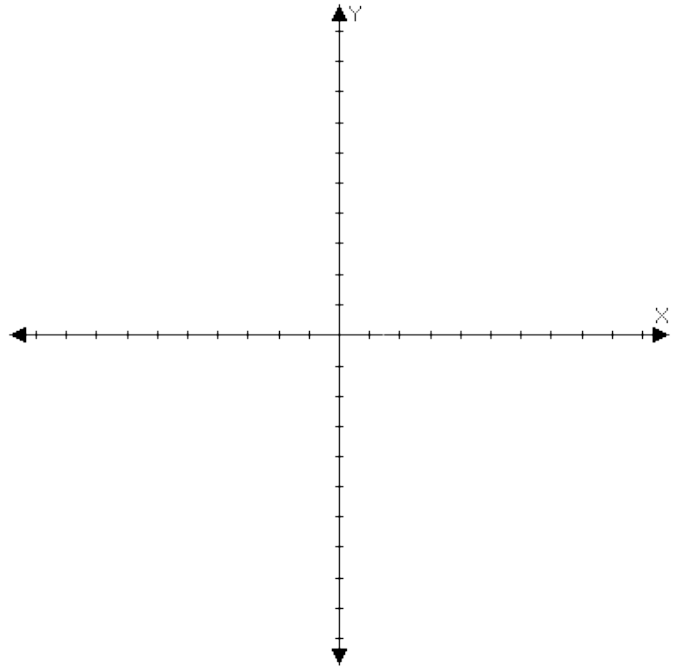
Exercise 4: Graph the given linear inequality.

$$y \leq \frac{5}{6}x - 3$$



Exercise 5: Graph the given linear inequality.

$$x + 2y + 4 < 0$$



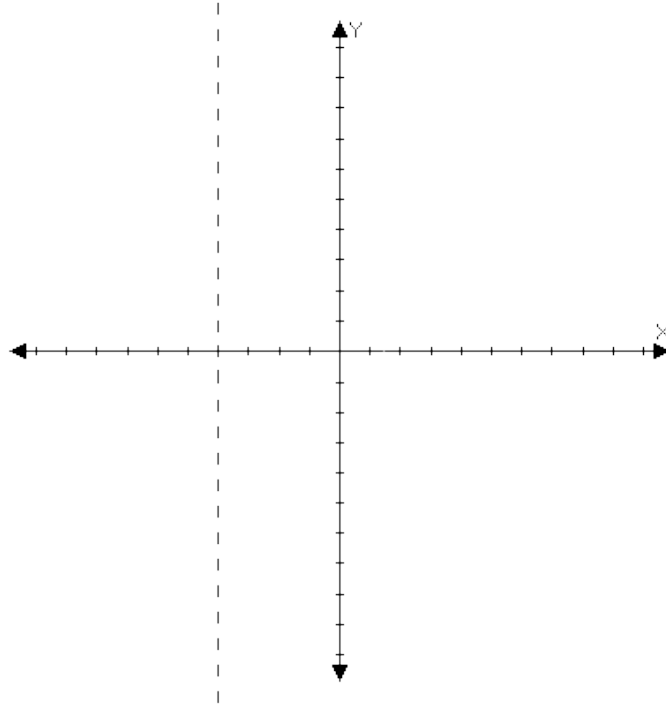
## Review Exercise Set 10 Answer Key

Exercise 1: Graph the given linear inequality.

$$x > -4$$

Rewrite the inequality as a linear equation and graph the line

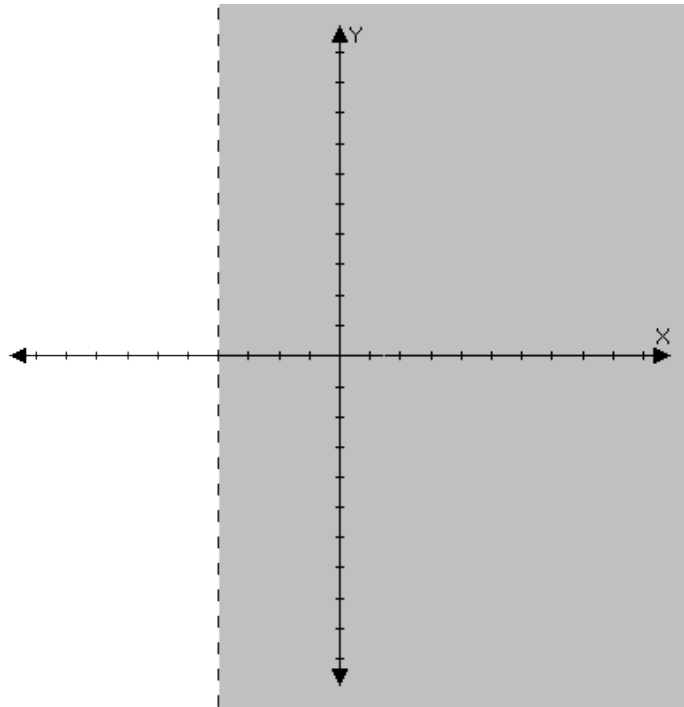
$$x = -4$$



Since the original inequality did not contain an equals sign the vertical line  $x = -4$  must be drawn as a dashed line to indicate that it is not part of the solution area.

Exercise 1 (Continued):

Now, shade in the solution area



Exercise 2: Graph the given linear inequality.

$$2x < 3y + 12$$

Solve the inequality with  $y$  on the left side and then rewrite it with an equals sign to represent the boundary line

$$2x < 3y + 12$$

$$2x - 12 < 3y$$

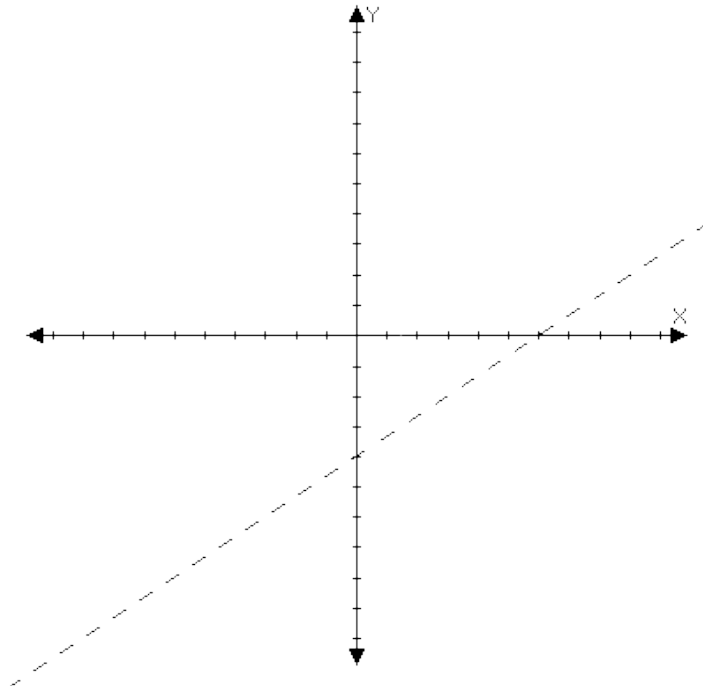
$$\frac{2}{3}x - 4 < y$$

$$y > \frac{2}{3}x - 4$$

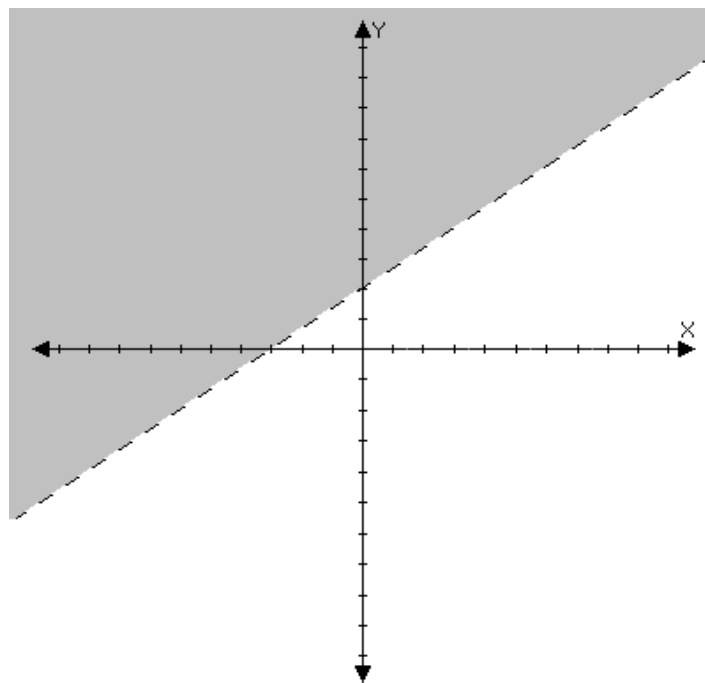
$$y = \frac{2}{3}x - 4$$

Exercise 2 (Continued):

Graph the line as a dashed line



Now, shade in the solution area



Exercise 3: Graph the given linear inequality.

$$-2x + 3y \geq 6$$

Solve the inequality with  $y$  on the left side and then rewrite it with a equals sign to represent the boundary line

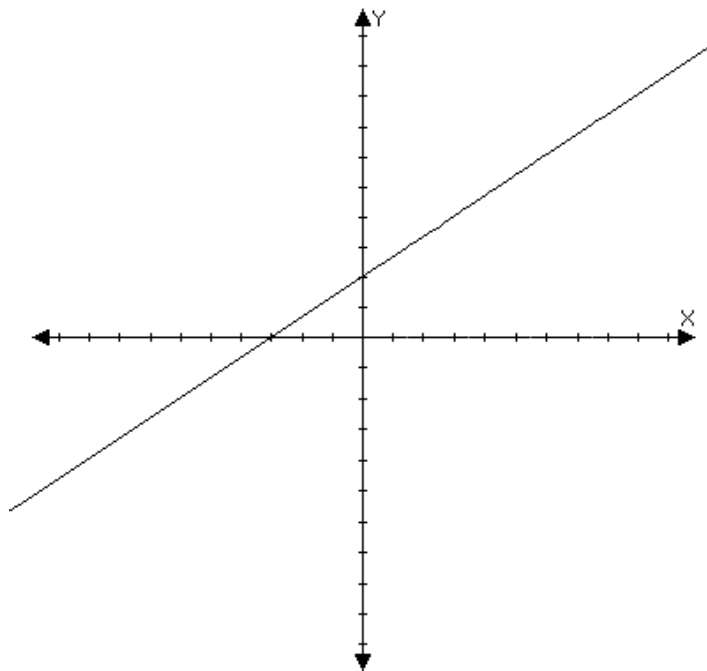
$$-2x + 3y \geq 6$$

$$3y \geq 2x + 6$$

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

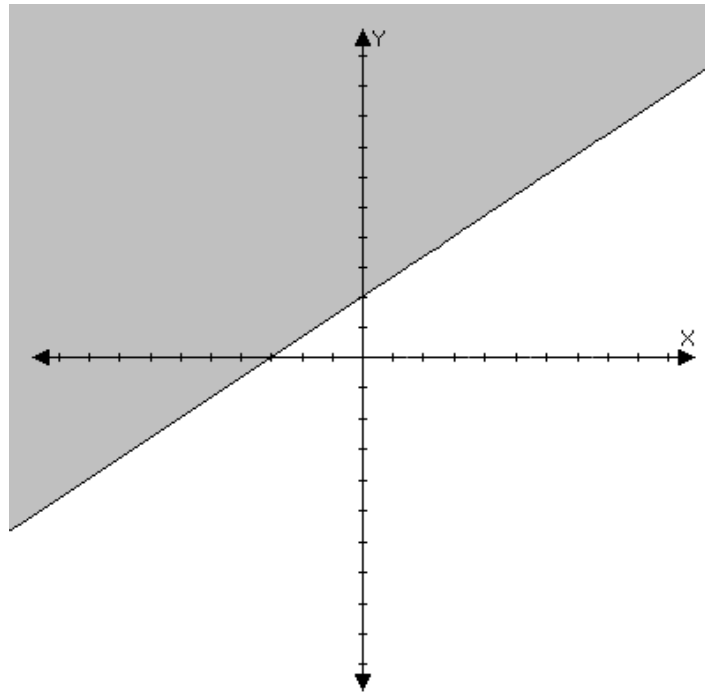
$$y = \frac{2}{3}x + 2$$

Graph the line as a solid line



Exercise 3 (Continued):

Now, shade in the solution area



Exercise 4: Graph the given linear inequality.

$$y \leq \frac{5}{6}x - 3$$

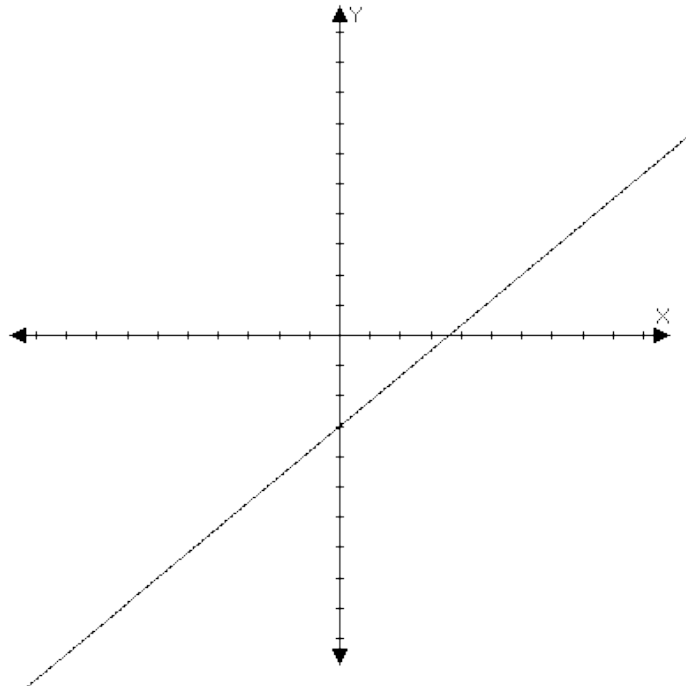
Rewrite the inequality with a equals sign to represent the boundary line

$$y = \frac{5}{6}x - 3$$

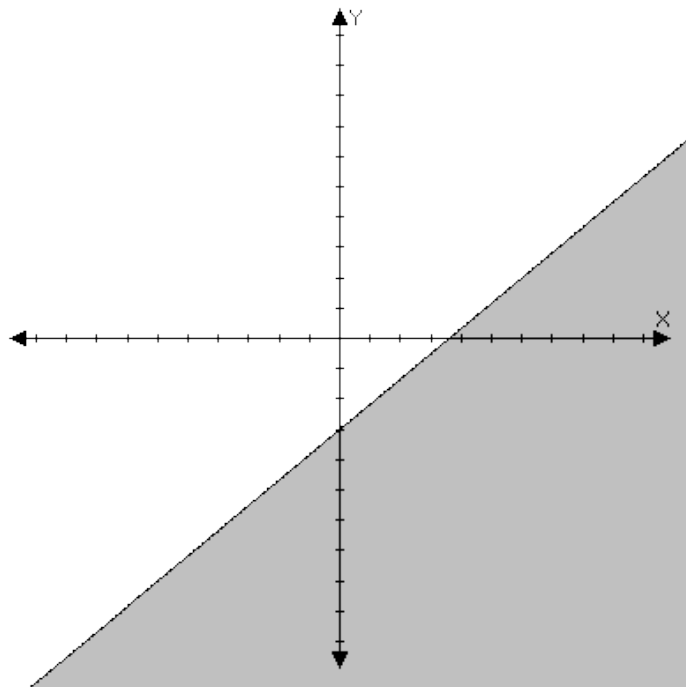


Exercise 4 (Continued):

Graph the line as a solid line



Now, shade in the solution area



Exercise 5: Graph the given linear inequality.

$$x + 2y + 4 < 0$$

Solve the inequality with  $y$  on the left side and then rewrite it with a equals sign to represent the boundary line

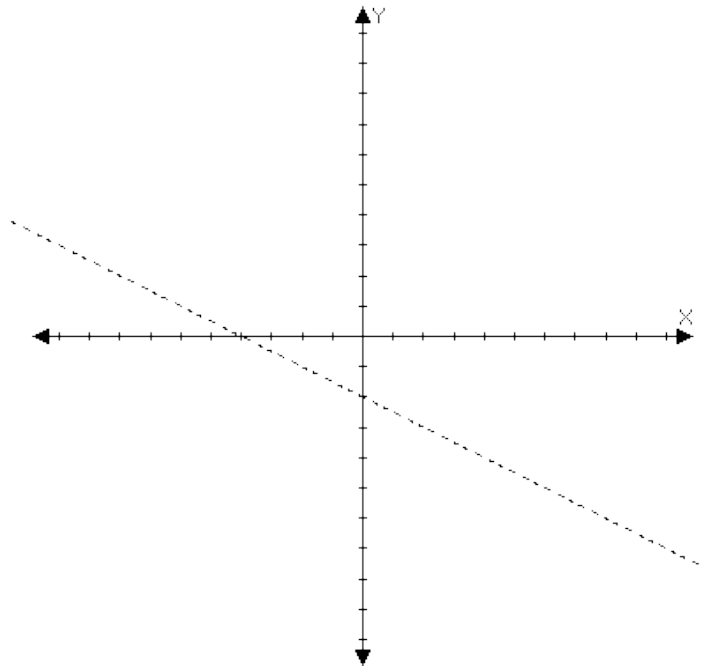
$$x + 2y + 4 < 0$$

$$2y < -x - 4$$

$$y < -\frac{1}{2}x - 2$$

$$y = -\frac{1}{2}x - 2$$

Graph the line as a dashed line



Exercise 5 (Continued):

Now, shade in the solution area

