3.8 Graphing a Line Given the Equation in Standard Form

• Example 1

Graph the line $2x - y - 4 = 0$. One method is to find the x- and y-intercepts.

To find the x-intercept, we set $y = 0$ in the equation and solve for x.

$$2x - (0) - 4 = 0$$
$$2x = 4$$
$$x = 2$$

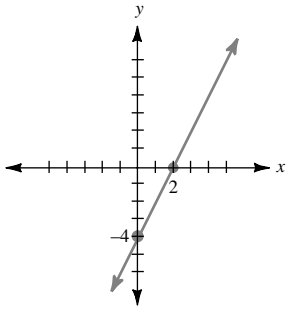
Thus the line passes through the point (2, 0)

To find the y-intercept, we set $x = 0$ in the equation and solve for y.

$$2(0) - y - 4 = 0$$
$$y = -4$$

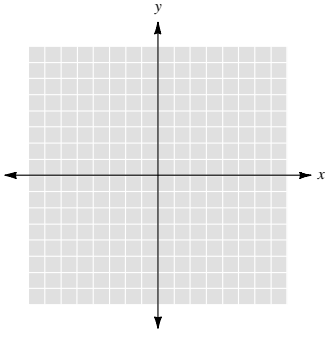
Thus the line passes through the point $(0, -4)$.

Draw the line through these two points.

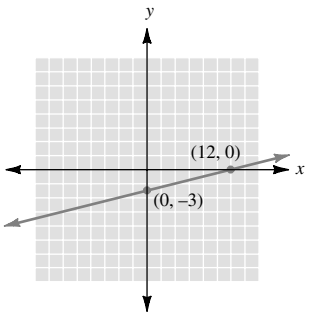


CHECK YOURSELF 1

Graph the line $x - 4y - 12 = 0$.



CHECK YOURSELF ANSWER



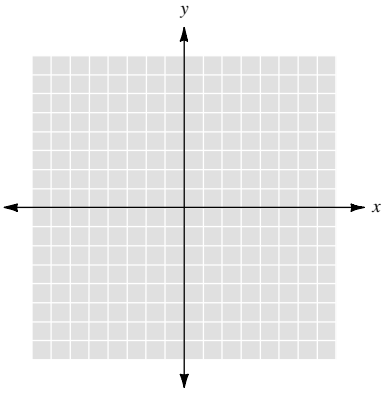
3.8 Exercises

Name

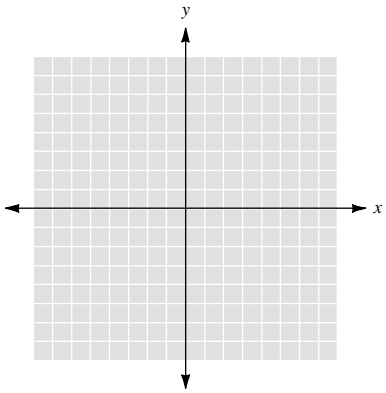
Section Date

Graph the following lines.

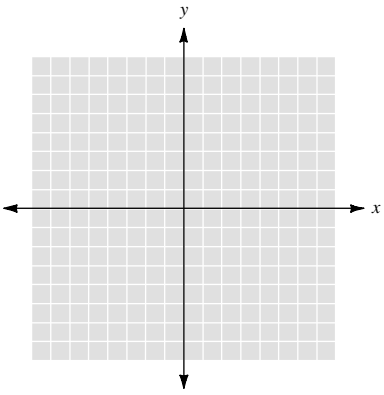
1. $3x - 2y = 6$



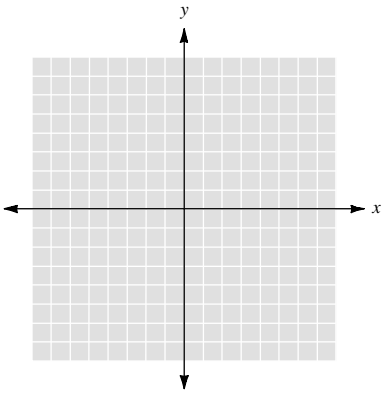
2. $-x + 4y = 8$



3. $5x - 3y = 30$



4. $-2x + 8y = 8$



5. $13x - 2y = 26$