

# 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  $x$ .

$$\begin{aligned} 2x - (0) - 4 &= 0 \\ 2x &= 4 \\ x &= 2 \end{aligned}$$

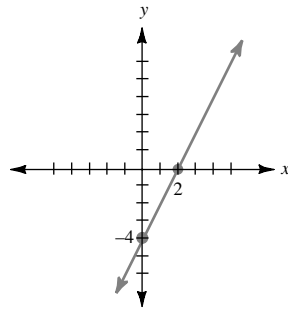
Thus the line passes through the point  $(2, 0)$

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

$$\begin{aligned} 2(0) - y - 4 &= 0 \\ y &= -4 \end{aligned}$$

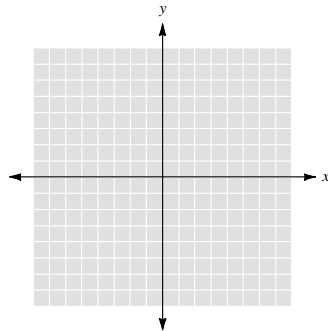
Thus the line passes through the point  $(0, -4)$ .

Draw the line through these two points.

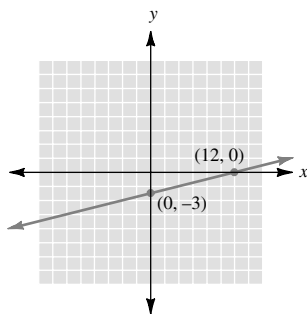


## • • • CHECK YOURSELF 1

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



● ● ● CHECK YOURSELF ANSWER



# 3.8 Exercises

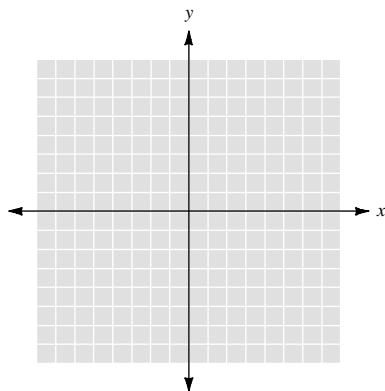
Name \_\_\_\_\_

Section \_\_\_\_\_

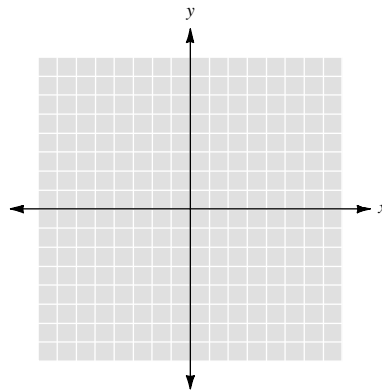
Date \_\_\_\_\_

Graph the following lines.

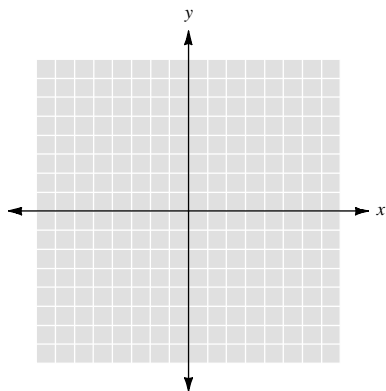
1.  $3x - 2y = 6$



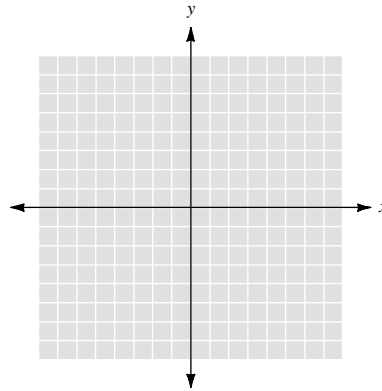
2.  $-x + 4y = 8$



3.  $5x - 3y = 30$



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



5.  $13x - 2y = 26$

