

**SKILL**  
**75** **Skills Readiness**  
**Graph Linear Functions**

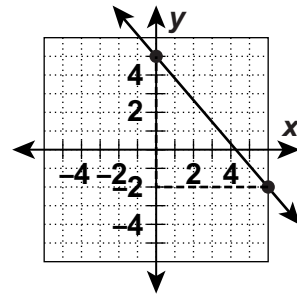
When a linear function is written in slope-intercept form ( $y = mx + b$ ), you have two pieces of information that help you graph the function—the slope and the  $y$ -intercept.

**slope ( $m$ )** = rise over run (how much the line rises vertically from left to right compared to how much it runs horizontally). If the slope is negative, the line will fall from left to right, rather than rising.

**$y$ -intercept ( $b$ )** = where the function crosses the vertical ( $y$ ) axis. The point is  $(0, b)$ .

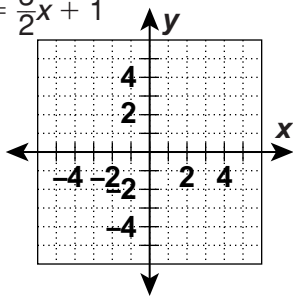
Example: Graph the function  $y = -\frac{7}{6}x + 5$

- Step 1: Place a dot on the  $y$ -intercept  $(0, 5)$ .  
 Step 2: Fall 7 units vertically and then run 6 units to the right.  
 Place a second dot at the new location.  
 Step 3: Draw a line through the two dots.

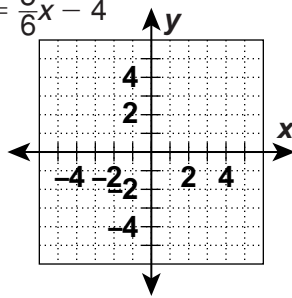


**Practice on Your Own**  
**Graph each function.**

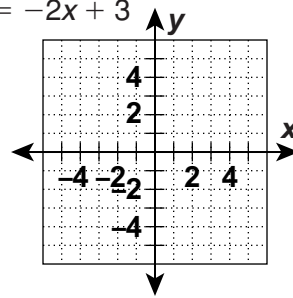
1.  $y = \frac{3}{2}x + 1$



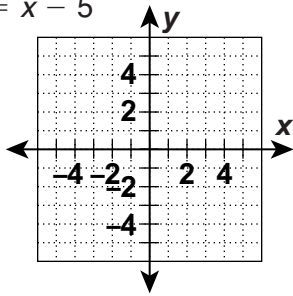
2.  $y = \frac{5}{6}x - 4$



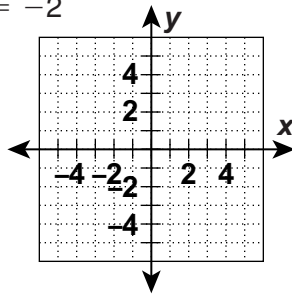
3.  $y = -2x + 3$



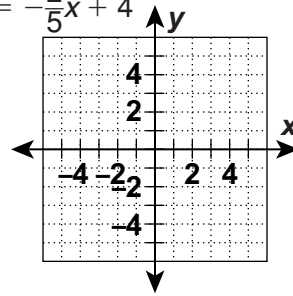
4.  $y = x - 5$



5.  $y = -2$



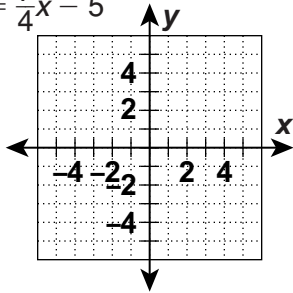
6.  $y = -\frac{2}{5}x + 4$



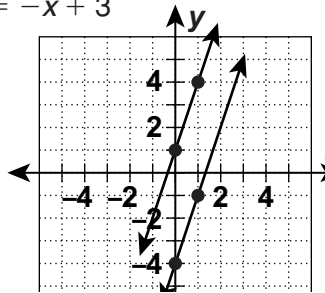
**Check**

Graph each function.

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



8.  $y = -x + 3$



9.  $y = 2x - 1$

