Multimedia

A video demonstration of the solution for *Example 2* is provided.

Example 2

The equation $y - 4 = 2.7(x + 3)$ represents a linear relation. State the slope of the graph of this relation and a point you know will be on the graph of the relation.

The equation is in slope-point form, so the slope can be determined by inspection.

$m = 2.7$

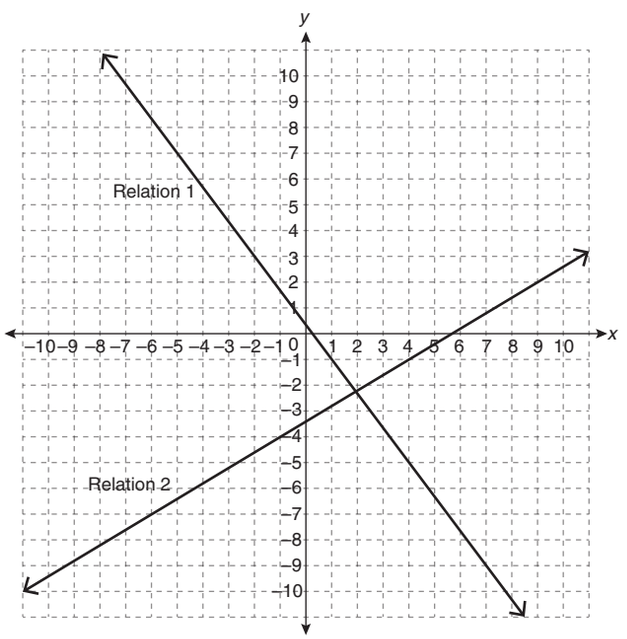
To interpret this equation correctly, it may help to write the addition as a subtraction of a negative. Doing so will help the equation better resemble the form $y - y_1 = m(x - x_1)$.

$y - 4 = m(x - (-3))$

The point $(-3, 4)$ lies on the graph of the relation.

Check Up

1. Determine an equation in slope-point form for each relation represented below.

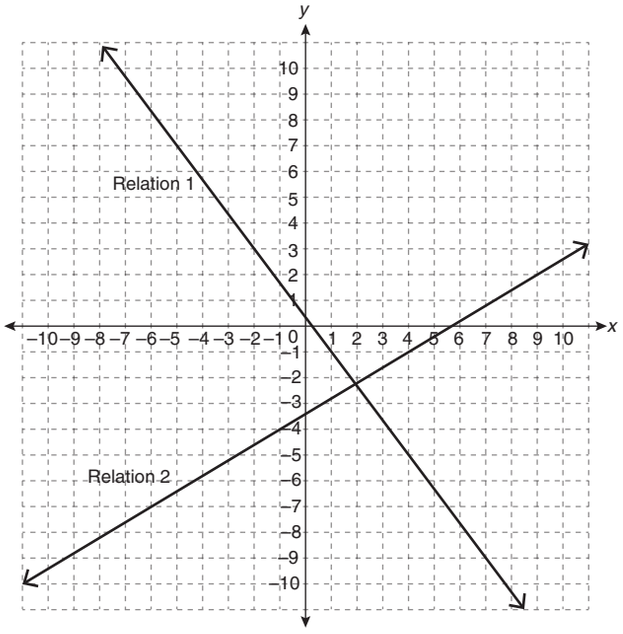


Multimedia

A video demonstration of the solution for this *Check Up* question is provided.

☑ Compare your answer.

1. Determine an equation in slope-point form for each relation represented below.



The graph of Relation 1 has a slope of $-\frac{4}{3}$ and passes through the points $(-5,7)$, $(-2,3)$, $(1,-1)$, $(4,-5)$, and $(7,-9)$. Any of these points could be entered into the slope-point equation. The equation shown uses $(-5,7)$.

$$y-y_1=m(x-x_1)$$
$$y-7=-\frac{4}{3}(x-(-5))$$
$$y-7=-\frac{4}{3}(x+5)$$

The graph of Relation 2 has a slope of $\frac{3}{5}$ and passes through the points $(-6,-7)$, $(-1,-4)$, $(4,-1)$, and $(9,2)$. Again, any of these points could be entered into the slope-point equation. The equation shown uses $(-6,-7)$.

$$y-y_1=m(x-x_1)$$
$$y-(-7)=\frac{3}{5}(x-(-6))$$
$$y+7=\frac{3}{5}(x+6)$$