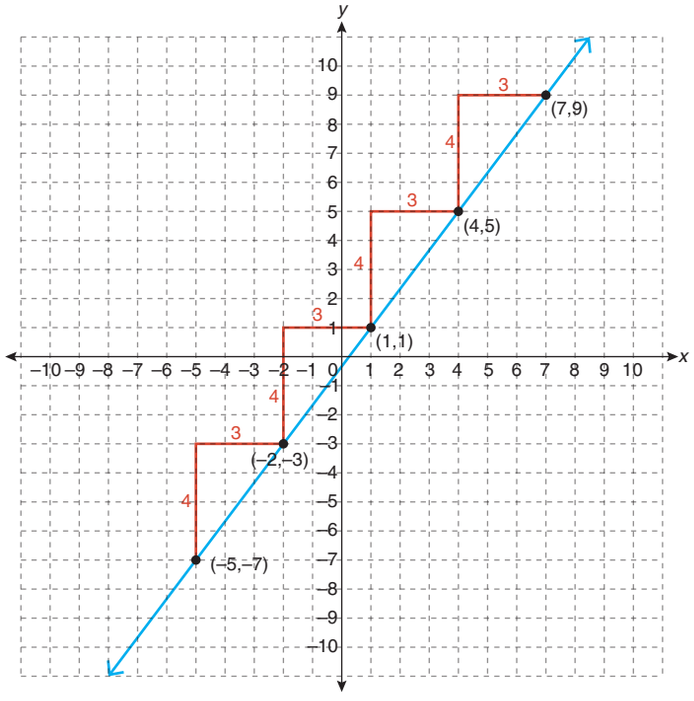
Example 2

...continued...

Draw a line through the points.



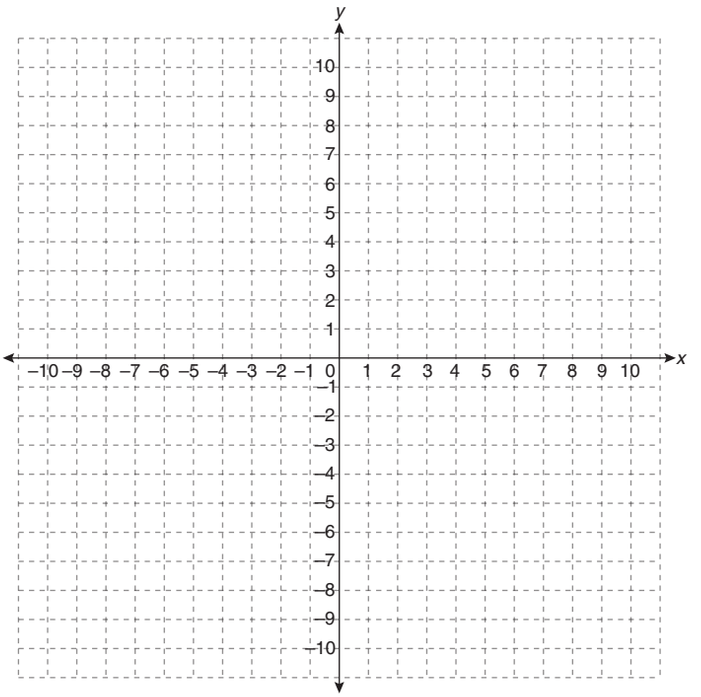
Check Up

1. How many known points are required to draw the graph of a linear relation?

2. Consider a linear relation with a slope of –3.75.

   a. Express the slope as a fraction in lowest terms.

b. Draw the graph of a linear relation that passes through the point (9, –8) and has a slope of –3.75.



☑ Compare your answers.

1. How many known points are required to draw the graph of a linear relation?

   Two points are required to draw a line.

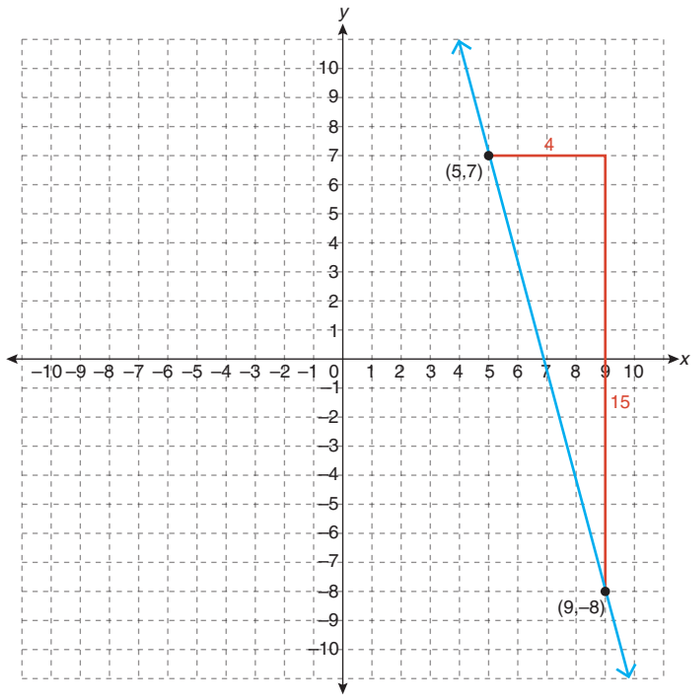
2. Consider a linear relation with a slope of –3.75.

   a. Express the slope as a fraction in lowest terms.

$$
\begin{aligned}
-3.75 &= -\frac{3.75}{1} \\
&= -\frac{3.75}{1} \times \frac{100}{100} \\
&= -\frac{375}{100} \\
&= -\frac{375 \div 25}{100 \div 25} \\
&= -\frac{15}{4}
\end{aligned}
$$

b. Draw the graph of a linear relation that passes through the point (9, –8) and has a slope of –3.75.

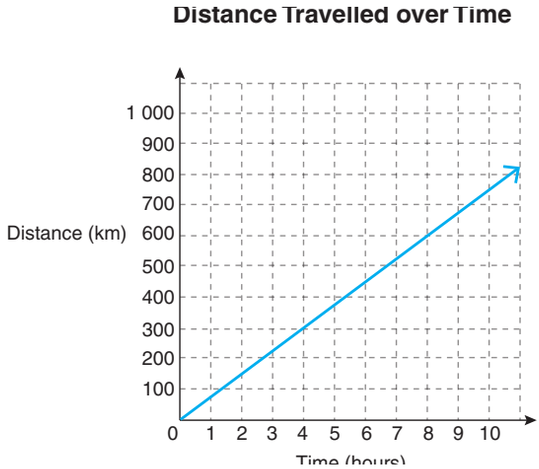
$m = -3.75 = -\frac{15}{4}$



The slope of a line can be used to interpret the corresponding linear relation. The following *Investigation* explores the meaning of slope as more than just the steepness of a line.

Investigation

The following linear relation represents a vehicle's distance travelled over time.



1. State two points on the graph of the linear relation. Use those points to determine the slope of the relation.