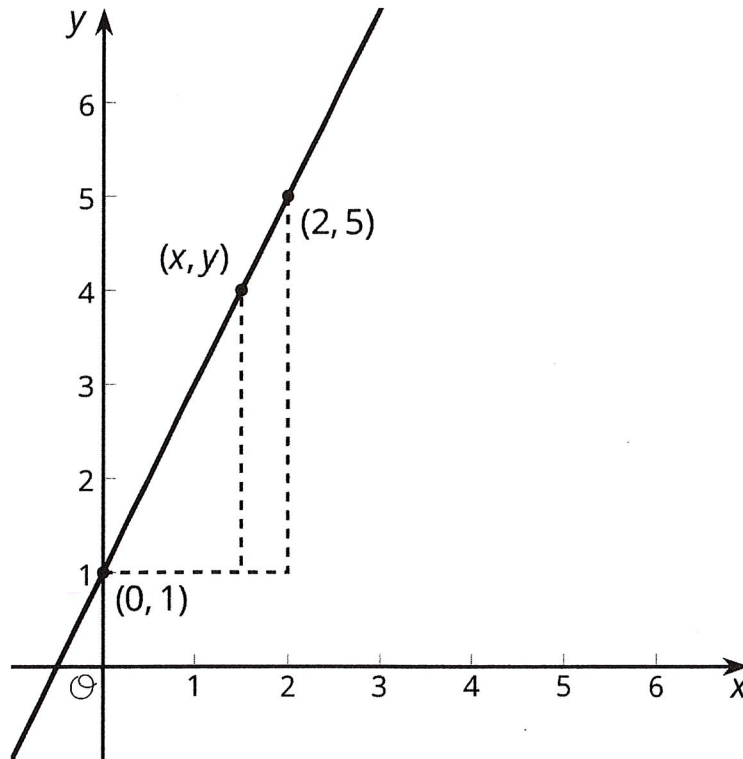


Unit 2

Lesson 12 Summary

We can use what we know about slope to decide if a point lies on a line. Here is a line with a few points labeled.



The slope triangle with vertices (0, 1) and (2, 5) gives a slope of $\frac{5-1}{2-0} = 2$. The slope triangle with vertices (0, 1) and (x, y) gives a slope of $\frac{y-1}{x}$. Since these slopes are the same, $\frac{y-1}{x} = 2$ is an equation for the line. So, if we want to check whether or not the point (11, 23) lies on this line, we can check that $\frac{23-1}{11} = 2$. Since (11, 23) is a solution to the equation, it is on the line!

(11, 23)

$$\frac{y-1}{x} = 2$$

$$\frac{23-1}{11} = \frac{22}{11} = 2$$