

Exercise 8

For the following exercises, determine whether the relation represents y as a function of x .

$$5x + 2y = 10$$

Solution

Try to solve the equation for y , the output.

$$5x + 2y = 10$$

$$2y = -5x + 10$$

$$y = -\frac{5}{2}x + 5 \tag{1}$$

The relation $5x + 2y = 10$ is a function because for every input x , there's exactly one output given by equation (1). This is reflected in the graph by the fact that any vertical line passes through the curve exactly once.

