

Answer on Question #58194 – Math – Algebra

Question

WHAT IS THE SLOPE OF THE LINE WITH THE EQUATION $2X+3Y+6=0$

Solution

First method

Transform equation

$$2x+3y+6=0$$

to the slope-intercept form

$$y=mx+b,$$

where m is the slope, b is the y -intercept.

Let

$$2x+3y+6=0$$

Divide by 3:

$$\frac{2x}{3} + y + 2 = 0$$

$$y = -\frac{2x}{3} - 2.$$

Therefore, $m = -\frac{2}{3}$ is the slope.

Second method

Slope formula:

$$m = \frac{y_1 - y_2}{x_1 - x_2}$$

We need two points. Let the first point be $x_1 = 0, y_1 = -2$, and the second one will be

$$x_2 = -3, y_2 = 0.$$

Then the slope is given by

$$m = \frac{-2 - 0}{0 - (-3)} = \frac{-2}{3} = -\frac{2}{3}.$$

Answer: $-\frac{2}{3}$.