6.3 Key Concepts 4 Points on Lines Worked Example

Example: Determine whether the point $(2, -1)$ is on the line $y = 3x - 5$.

Solution: Substitute $x = 2$ into the equation.

$$\begin{aligned} y &= 3(2) - 5 \\ &= 6 - 5 \\ &= 1 \end{aligned}$$

Since this does not match the given value for y, the point is not on the line.

Practice:

1. Determine whether the point $(3, -2)$ is on the line $y = 2x - 8$.

2. Determine whether the point $(5, -1)$ is on the line $y = \frac{3}{5}x - 2$.

Answers: 1. Yes. 2. No.