

3.4

Solutions to a Linear Equation in Two Variables: Problem Type 2

• Example 1

For each of the points $A = (0, 5)$ and $B = (-2, 7)$, indicate whether the point lies on line 1, line 2, or on neither line.

Line 1: $6x + 2y = 10$

Line 2: $x + y = 5$

Point $A = (0, 5)$ is on line 1 because $6 \cdot 0 + 2 \cdot 5 = 10$.

Point $B = (-2, 7)$ is on line 2 because $-2 + 7 = 5$.

● ● ● CHECK YOURSELF 1

For each of the given points, indicate whether the point lies on line 1, line 2, or neither.

$A = (1, 3)$ $B = (-1, 3)$

Line 1: $2x - 4y = -10$

Line 2: $6x - 2y = 14$

● ● ● CHECK YOURSELF ANSWER

1. A is on line 1; B is on neither line.

3.4 Exercises

Name _____

Section _____

Date _____

A N S W E R S

1. _____

2. _____

3. _____

For each given point, indicate whether the point lies on line 1, line 2, or neither line.

1. $A = (-1, 7); B = (0, 10)$

Line 1: $3x - y = -10$

Line 2: $-2x - 5y = -50$

2. $A = (1, 6); B = (3, -5)$

Line 1: $-2x + y = -11$

Line 2: $4x - 3y = -14$

3. $A = (0, 5); B = (6, 0)$

Line 1: $5x + 6y = 30$

Line 2: $15x + 18y = 90$