

 3.5

# 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  $A = (0, 5)$  is also on line 2 because  $0 + 5 = 5$ .

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:  $6x - 2y = 14$

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## ● ● ● CHECK YOURSELF ANSWER

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

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# 3.5 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:  $15x + 18y = 90$