

## Readiness Assurance Test

Choose the most appropriate response for each question.

1) Which of the following describe the set of all points on the line  $2x + 3y = 0$ ?

- (a)  $\{(x, y)\}$                       (b)  $\{(2x, 3y)\}$                       (c)  $\{(x, y) \mid 2x + 3y = 0\}$     (d)  $\{(2x, 3y) \mid 2x + 3y = 0\}$

2) How many solutions are there for the system of linear equations represented by the following graph?



- (a) One                      (b) Two                      (c) Zero                      (d) Infinitely-many

3) Which of the following points is an element of the set  $\{(x, y) \mid 3x + 4y = 12\}$ ?

- (a)  $(1, 1)$                       (b)  $(3, 4)$                       (c)  $(4, -3)$                       (d)  $(8, -3)$

4) How many solutions are there for the system of linear equations represented by the following graph?  
(This graph represents two completely overlapping lines.)



- (a) Zero                      (b) One                      (c) Two                      (d) Infinitely-many

5) How many solutions are there for the system of linear equations represented by the following graph?



- (a) Zero                      (b) One                      (c) Two                      (d) Infinitely-many

6) How many solutions are there for the system of linear equations represented by the following graph?  
(This graph represents two non-overlapping parallel lines.)



- (a) Zero                      (b) One                      (c) Two                      (d) Infinitely-many

7) Solve the following system of linear equations.

$$\begin{aligned} y &= 2x + 5 \\ y &= -x + 2 \end{aligned}$$

- (a)  $(x, y) = (-1, 3)$       (b)  $(x, y) = (4, -2)$       (c) There are no solutions.      (d) There are infinitely-many solutions.

8) Solve the following system of linear equations.

$$\begin{aligned} y &= 3x + 5 \\ y &= 3x + 2 \end{aligned}$$

- (a)  $(x, y) = (3, 4)$       (b)  $(x, y) = (-5, 1)$       (c) There are no solutions.      (d) There are infinitely-many solutions.

9) Solve the following system of linear equations.

$$\begin{aligned} x + 2y &= 4 \\ 2x - 3y &= 1 \end{aligned}$$

- (a) There are no solutions.      (b) There are infinitely-many solutions.      (c)  $(x, y) = (-1, 4)$       (d)  $(x, y) = (2, 1)$

10) Solve the following system of linear equations.

$$\begin{aligned} 4x - 8y &= 12 \\ -6x + 12y &= -18 \end{aligned}$$

- (a) There are no solutions.      (b) There are infinitely-many solutions.      (c)  $(x, y) = (3, 3)$       (d)  $(x, y) = (-2, 1)$