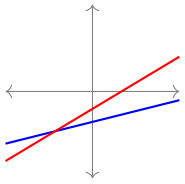
Readiness Assurance Test

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

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

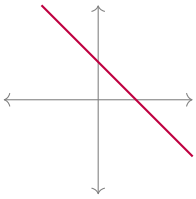


(a) Zero (b) One (c) Two (d) Infinitely-many

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

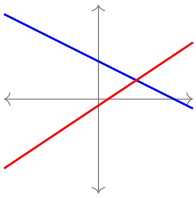
(a) $(1, 1)$ (b) $(3, 4)$ (c) $(4, -3)$ (d) $(8, -3)$

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



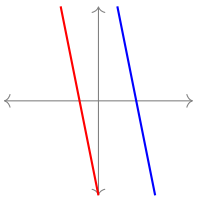
(a) One (b) Two (c) Infinitely-many (d) Zero

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

7) Solve the following system of linear equations.

$$y = 2x + 5$$
$$y = -x + 2$$

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

8) Solve the following system of linear equations.

$$y = 3x + 5$$
$$y = 3x + 2$$

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

9) Solve the following system of linear equations.

$$x + 2y = 4$$
$$2x - 3y = 1$$

(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.

$$4x - 8y = 12$$
$$-6x + 12y = -18$$

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