Practice 21

System of Linear Equations Substitution Method

Solve the system of equations by the substitution method.

1) 1) _____

$x + y = 3$

$y = 2x$

A) {(1, -2)} B) {(-1, -2)} C) {(1, 2)} D) {(-1, 2)}

2) 2) _____

$y = 5x + 4$

$5y + 15x = 60$

A) {(-1, 9)} B) {(9, 1)} C) {(1, 9)} D) ∅

3) 3) _____

$5x - 2y = -162$

$x - 4y = 0$

A) {(-36, -9)} B) {(-36, 9)} C) {(-35, -9)} D) {(-9, -36)}

4) $x - 4y = -25$ 4) _____

$6x - 5y = 2$

A) {(6, 9)} B) {(7, 8)}

C) {(x, y) | $x - 4y = -25$} D) ∅

5) $4y = 50 - 6x$ 5) _____

$2x = 70 - 4y$

A) {(-5, 20)} B) {(4, -20)}

Identify systems with no solution and systems with infinitely many solutions, using set notation to express their solution sets.

6) $x + y = 5$ 6) _____

$x + y = -1$

A) {(x, y)| $x + y = 5$} B) ∅

7) $y = 20 - 4x$ 7) _____

$16x + 4y = 80$

A) {(x, y) | $4x + y = 20$} B) ∅

8) $x + 2y = -9$ 8) _____

$-2x - 4y = 18$

A) {(x, y) | $x + 2y = -9$} B) ∅

9) $\frac{x}{7} + \frac{y}{14} = 1$ 9) _____

$\frac{x}{3} - \frac{y}{6} = 0$

A) $\left\{\left(\frac{7}{2}, 7\right)\right\}$ B) ∅

Answer Key
Testname: 21_SYSTEM OF LINEAR EQUATIONS SUBSTITUTION METHOD

1) C
2) C
3) A
4) B
5) A
6) B
7) A
8) A
9) A