

Name: _____

Date: _____

A.1.1 Simultaneous Equations: Substitution Method

Solve each system of equations using substitution method.

1) $5x + 2y = 16$
 $x + 8y = 26$

2) $c + 6d = 7$
 $-c - 2d = -2$

3) $8p + 7q = 43$
 $2p - 7 = -q$

4) $-5a + b = 8$
 $7a + 9b = -32$

5) $-5 = 2m + 6n$
 $4m + 5n - 18 = 0$

6) $v = 2 - 6u$
 $9u + 2v = 3$

7) $r + 2s = 4$
 $3s + r = 1$

8) $6y + 5z = 0$
 $3z = 7y + 53$

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A.1.2 Simultaneous Equations: Substitution Method

Solve each system of equations using substitution method.

1) $4u + 5v = 28$
 $2v + 9u = 63$

2) $6p + 7q = -17$
 $5p + 8q + 38 = 0$

3) $12 = 3m + 4n$
 $4n - 2 = -m$

4) $-r - s = 5$
 $-5 = 2s - r$

5) $8c = 5 - 3d$
 $3c = 8 - 2d$

6) $a = 4 + b$
 $5a - b = 0$

7) $5x + y - 8 = 0$
 $-3y + 7x + 2 = 0$

8) $8s + 3t = 18$
 $s + t = 1$

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A.1.3 Simultaneous Equations: Substitution Method

Solve each system of equations using substitution method.

1) $9p + 8q = 58$
 $-p + 5q = 23$

2) $2a + 7b = 13$
 $8b = 2 - a$

3) $10 = 5c + 3d$
 $9 = 2d + 4c$

4) $-u + 5v + 7 = 0$
 $u + 8v = -32$

5) $3r = 1 - s$
 $7s = 4 - 6r$

6) $4m + n = 2$
 $9n + m = 18$

7) $7y + 50 = 4z$
 $8y + 5z - 29 = 0$

8) $-x - y = 3$
 $2 = 3x - y$

Answers

A.1.1 Simultaneous Equations: Substitution Method

Solve each system of equations using substitution method.

$$\begin{aligned} 1) \quad & 5x + 2y = 16 \\ & x + 8y = 26 \end{aligned}$$

(2, 3)

$$\begin{aligned} 2) \quad & c + 6d = 7 \\ & -c - 2d = -2 \end{aligned}$$

$\left(-\frac{1}{2}, \frac{5}{4}\right)$

$$\begin{aligned} 3) \quad & 8p + 7q = 43 \\ & 2p - 7 = -q \end{aligned}$$

(1, 5)

$$\begin{aligned} 4) \quad & -5a + b = 8 \\ & 7a + 9b = -32 \end{aligned}$$

(-2, -2)

$$\begin{aligned} 5) \quad & -5 = 2m + 6n \\ & 4m + 5n - 18 = 0 \end{aligned}$$

$\left(\frac{19}{2}, -4\right)$

$$\begin{aligned} 6) \quad & v = 2 - 6u \\ & 9u + 2v = 3 \end{aligned}$$

$\left(\frac{1}{3}, 0\right)$

$$\begin{aligned} 7) \quad & r + 2s = 4 \\ & 3s + r = 1 \end{aligned}$$

(10, -3)

$$\begin{aligned} 8) \quad & 6y + 5z = 0 \\ & 3z = 7y + 53 \end{aligned}$$

(-5, 6)

Answers

A.1.2 Simultaneous Equations: Substitution Method

Solve each system of equations using substitution method.

$$\begin{aligned} 1) \quad & 4u + 5v = 28 \\ & 2v + 9u = 63 \end{aligned}$$

$$\underline{(7, 0)}$$

$$\begin{aligned} 2) \quad & 6p + 7q = -17 \\ & 5p + 8q + 38 = 0 \end{aligned}$$

$$\underline{(10, -11)}$$

$$\begin{aligned} 3) \quad & 12 = 3m + 4n \\ & 4n - 2 = -m \end{aligned}$$

$$\underline{\left(5, -\frac{3}{4}\right)}$$

$$\begin{aligned} 4) \quad & -r - s = 5 \\ & -5 = 2s - r \end{aligned}$$

$$\underline{\left(-\frac{5}{3}, -\frac{10}{3}\right)}$$

$$\begin{aligned} 5) \quad & 8c = 5 - 3d \\ & 3c = 8 - 2d \end{aligned}$$

$$\underline{(-2, 7)}$$

$$\begin{aligned} 6) \quad & a = 4 + b \\ & 5a - b = 0 \end{aligned}$$

$$\underline{(-1, -5)}$$

$$\begin{aligned} 7) \quad & 5x + y - 8 = 0 \\ & -3y + 7x + 2 = 0 \end{aligned}$$

$$\underline{(1, 3)}$$

$$\begin{aligned} 8) \quad & 8s + 3t = 18 \\ & s + t = 1 \end{aligned}$$

$$\underline{(3, -2)}$$

Answers

A.1.3 Simultaneous Equations: Substitution Method

Solve each system of equations using substitution method.

$$\begin{aligned} 1) \quad & 9p + 8q = 58 \\ & -p + 5q = 23 \end{aligned}$$

$$\underline{(2, 5)}$$

$$\begin{aligned} 2) \quad & 2a + 7b = 13 \\ & 8b = 2 - a \end{aligned}$$

$$\underline{(10, -1)}$$

$$\begin{aligned} 3) \quad & 10 = 5c + 3d \\ & 9 = 2d + 4c \end{aligned}$$

$$\underline{\left(\frac{7}{2}, -\frac{5}{2}\right)}$$

$$\begin{aligned} 4) \quad & -u + 5v + 7 = 0 \\ & u + 8v = -32 \end{aligned}$$

$$\underline{(-8, -3)}$$

$$\begin{aligned} 5) \quad & 3r = 1 - s \\ & 7s = 4 - 6r \end{aligned}$$

$$\underline{\left(\frac{1}{5}, \frac{2}{5}\right)}$$

$$\begin{aligned} 6) \quad & 4m + n = 2 \\ & 9n + m = 18 \end{aligned}$$

$$\underline{(0, 2)}$$

$$\begin{aligned} 7) \quad & 7y + 50 = 4z \\ & 8y + 5z - 29 = 0 \end{aligned}$$

$$\underline{(-2, 9)}$$

$$\begin{aligned} 8) \quad & -x - y = 3 \\ & 2 = 3x - y \end{aligned}$$

$$\underline{\left(-\frac{1}{4}, -\frac{11}{4}\right)}$$