

## Systems of Equations - Cramer's Rule

Solve each system of equations using Cramer's rule.

1)  $-2r - p = 4q$

$2r = 27 - 9p + 2q$

$p + q - r = 3$

2)  $5s - t + 8u = 48$

$-3s + 2t - u = -5$

$2s = -42 + 4t - 7u$

3)  $b + 5d = 9 - 3c$

$b + c + 4d = 10$

$2c - d = 1$

5)  $7u + v = -6 + 3z$

$w = -4u + 3v + z$

$2u = -5 - v + w$

7)  $6w + 3 = 5x - y$

$x = -3w + y - 26$

$w - 4x + y = 18$

8)  $r + 2s + 5t - 2 = 0$

$s - 17 = 9t - 2r$

$r - 2s = -6 - 5t$

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## Systems of Equations - Cramer's Rule

Solve each system of equations using Cramer's rule.

$$\begin{aligned} 1) \quad & -2r - p = 4q \\ & 2r = 27 - 9p + 2q \\ & p + q - r = 3 \end{aligned}$$

$$\underline{\underline{\left(3, -\frac{1}{2}, -\frac{1}{2}\right)}}$$

$$\begin{aligned} 2) \quad & 5s - t + 8u = 48 \\ & -3s + 2t - u = -5 \\ & 2s = -42 + 4t - 7u \end{aligned}$$

$$\underline{\underline{(13, 17, 0)}}$$

$$\begin{aligned} 3) \quad & b + 5d = 9 - 3c \\ & b + c + 4d = 10 \\ & 2c - d = 1 \end{aligned}$$

$$\underline{\underline{(14, 0, -1)}}$$

$$\begin{aligned} 5) \quad & 7u + v = -6 + 3w \\ & w = -4u + 3v + 2 \\ & 2u = -5 - v + w \end{aligned}$$

$$\underline{\underline{(1, -4, 3)}}$$

$$\begin{aligned} 7) \quad & 6w + 3 = 5x - y \\ & x = -3w + y - 26 \\ & w - 4x + y = 18 \end{aligned}$$

$$\underline{\underline{(-5, -4, 7)}}$$

$$\begin{aligned} 8) \quad & r + 2s + 5t - 2 = 0 \\ & s - 17 = 9t - 2r \\ & r - 2s = -6 - 5t \end{aligned}$$

$$\underline{\underline{(3, 2, -1)}}$$

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