

Assignment

© 2013 Kuta Software LLC. All rights reserved.

Solve each system

1) $x - 2z = 2$

$5x - 4y + 5z = 4$

$x - 2y - 5z = 20$

2) $-2x + 3y + 5z = 15$

$-6x + 4y + 6z = 24$

$2x + 4y - 2z = 24$

3) $-x + 5y - 5z = 29$

$-2x - 2y - z = -5$

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

4) $6x + 3y + z = 4$

$6x - y - 3z = -4$

$-6x + 3y + 5z = 8$

5) $2a - 4b + 4c = 0$

$-a + 2b - 2c = 0$

$6a + 2b + 2c = -14$

6) $4r + 2s - 6t = 18$

$r - s - 6t = 27$

$r + s - 6t = 27$

$$\begin{aligned}
 7) \quad & 3a + 4b - 2c = -2 \\
 & -3a - 3b - 2c = -12 \\
 & 3a - 3b + 4c = 30
 \end{aligned}$$

$$\begin{aligned}
 8) \quad & -r + s - 3t = -6 \\
 & -5r - s - 2t = -4 \\
 & -r + 2s + 6t = 12
 \end{aligned}$$

Simplify. Write "undefined" for expressions that are undefined.

$$9) \begin{bmatrix} -2 & 6 \\ -1 & 3 \\ 2 & 5 \end{bmatrix} \cdot \begin{bmatrix} 3 & 6 \\ -3 & 6 \end{bmatrix}$$

$$10) \begin{bmatrix} -5 & 1 & 6 \\ -2 & 2 & -5 \end{bmatrix} \cdot \begin{bmatrix} -6 & 2 \\ -4 & -1 \\ 2 & -1 \end{bmatrix}$$

$$11) \begin{bmatrix} -2 & -3 \\ -3 & -1 \\ 4 & 2 \end{bmatrix} \cdot \begin{bmatrix} -1 & 2 \\ -3 & 1 \\ 4 & 5 \end{bmatrix}$$

$$12) \begin{bmatrix} 0 & -1 \\ 1 & 2 \end{bmatrix} \cdot \begin{bmatrix} 3 & 2 \\ -3 & 2 \end{bmatrix}$$

$$13) \begin{bmatrix} -2 & 2 & -2 \\ -2 & 3 & -4 \end{bmatrix} \cdot \begin{bmatrix} -3 \\ 6 \\ -3 \end{bmatrix}$$

$$14) \begin{bmatrix} -4 & 0 & -5 \\ -5 & 5 & -5 \end{bmatrix} \cdot \begin{bmatrix} 4 & 1 & 3 \\ 4 & 1 & 5 \end{bmatrix}$$

$$15) \begin{bmatrix} 5 \\ -4 \end{bmatrix} \cdot \begin{bmatrix} 4 & -1 \\ 6 & 3 \end{bmatrix}$$

$$16) \begin{bmatrix} 6 & 4 & -6 \\ 2 & -2 & -6 \end{bmatrix} \cdot \begin{bmatrix} 6 & -2 & 5 \\ -2 & -3 & 0 \end{bmatrix}$$

$$17) \begin{bmatrix} -2 & 4 \\ 0 & 1 \end{bmatrix} \cdot \begin{bmatrix} -3 & 6 & -1 \\ -1 & 0 & -4 \end{bmatrix}$$

$$18) \begin{bmatrix} 5 & 0 \\ 1 & 1 \\ 4 & 6 \end{bmatrix} \cdot \begin{bmatrix} 5 & 3 \\ -3 & -1 \\ -1 & 6 \end{bmatrix}$$

Answers to Assignment (ID: 1)

1) $(-2, -6, -2)$

2) $(-1, 6, -1)$

3) $(1, 3, -3)$

4) Infinitely many solutions

5) Infinitely many solutions

6) $(-3, 0, -5)$

7) $(4, -2, 3)$

8) $(0, 0, 2)$

9)
$$\begin{bmatrix} -24 & 24 \\ -12 & 12 \\ -9 & 42 \end{bmatrix}$$

10)
$$\begin{bmatrix} 38 & -17 \\ -6 & -1 \end{bmatrix}$$

11) Undefined

12)
$$\begin{bmatrix} 3 & -2 \\ -3 & 6 \end{bmatrix}$$

13)
$$\begin{bmatrix} 24 \\ 36 \end{bmatrix}$$

14) Undefined

15) Undefined

16) Undefined

17)
$$\begin{bmatrix} 2 & -12 & -14 \\ -1 & 0 & -4 \end{bmatrix}$$

18) Undefined