

# Math 1513 - College Algebra

## Discussion Board Week 13 - Due 2013.04.21

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Solve each system of equations. Indicate if the system is inconsistent or has an infinite number of solutions. Leave your final answers in fractional form, do NOT use decimals.

1.

$$\begin{aligned}x + 2y + 3z &= -6 \\2x - 3y - 4z &= 15 \\3x + 4y + 5z &= -8\end{aligned}$$

2.

$$\begin{aligned}2x + 3y + 4z &= -12 \\x - 2y + z &= -5 \\3x + y + 2z &= 1\end{aligned}$$

3.

$$\begin{aligned}x + y + z &= 1 \\x + y - 2z &= 3 \\2x + y + z &= 2\end{aligned}$$

4.

$$\begin{aligned}2x - y + z &= 3 \\x - 3y + z &= 4 \\-5x - 2z &= -5\end{aligned}$$

5.

$$\begin{aligned}x + y + z &= 2 \\x - y + 2z &= 3 \\3x + 5y + 2z &= 6\end{aligned}$$

6.

$$\begin{aligned}x + y + z &= 0 \\x + y &= 3 \\y + z &= 1\end{aligned}$$

7.

$$\begin{aligned}x + 2y + z &= 7 \\x + 2y + 3z &= 11 \\2x + y + 4z &= 12\end{aligned}$$

8.

$$\begin{aligned}4x + 2y - z &= 5 \\3x + 3y + 6z &= 1 \\5x + y - 8z &= 8\end{aligned}$$

9.

$$\begin{aligned}x + y + z &= 1 \\x + 2y + z &= 3 \\x + y - z &= 2\end{aligned}$$

10.

$$\begin{aligned}x + y - z &= 2 \\x + 2y + z &= 3 \\x + y + 4z &= 3\end{aligned}$$

11.

$$\begin{aligned}2x + y + 3z &= 8 \\ -x + y + z &= 10 \\ x + y + z &= 12\end{aligned}$$

12.

$$\begin{aligned}2x - 3z &= 4 \\ x + 4y - 5z &= -6 \\ 3x + 4y - z &= -2\end{aligned}$$

13.

$$\begin{aligned}x + 3y + 7z &= 1 \\ 3x - y - 5z &= 9 \\ 2x + y + z &= 4\end{aligned}$$

14.

$$\begin{aligned}2x - y + z &= 2 \\ 3x + y + 2z &= 3 \\ x + y - z &= -1\end{aligned}$$

15.

$$\begin{aligned}x - 2y + 3z &= -2 \\ x - 5y + 9z &= 4 \\ 2x - y &= 6\end{aligned}$$

16.

$$\begin{aligned}x + 2y - 2z &= 8 \\ 5y - z &= 6 \\ -2x + y + 3z &= -2\end{aligned}$$

17.

$$\begin{aligned}z - 2y + x &= -5 \\ z + 2x &= -10 \\ y - z &= 15\end{aligned}$$

18.

$$\begin{aligned}-3z + 2y &= 4 \\ 2z + x &= -2 \\ -8y + x + 14z &= -18\end{aligned}$$