

Math 1513 - College Algebra

Discussion Board Week 8 - Due 2011.07.29

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.

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