

Prof. Mingla
Assignment 3x3-Systems due 09/10/2022 at 11:35pm EDT

MAT1275-F22-Mingla-W033

Problem 1. (1 point) CUNY/CityTech/CollegeAlgebra_Trig/3x3-Systems/triangular.pg

$$\begin{aligned} -2x - 2y - 4z &= 0 \\ 2y + 3z &= 2 \\ -3z &= 0 \end{aligned}$$

Find the unique solution to this system of equations. Give your answer as a point. (x, y, z)

Hint: (Instructor hint preview: show the student hint after the following number of attempts: 2)
Perhaps start by looking at the third equation?

What can you determine from $-3z = 0$?

Can you use that in the other equations?

Correct Answers:

- $(-1, 1, 0)$

Problem 2. (1 point) CUNY/CityTech/CollegeAlgebra_Trig/3x3-Systems/monics.pg

$$\begin{aligned} x + 4y + z &= 16 \\ -5x + 4y + z &= -2 \\ -x + y + z &= 4 \end{aligned}$$

Find the unique solution to this system of equations. Give your answer as a point.

Correct Answers:

- $(3, 2, 5)$

Problem 3. (1 point) CUNY/CityTech/CollegeAlgebra_Trig/3x3-Systems/no-restrictions.pg

$$\begin{aligned} 5x + 2y - 5z &= 13 \\ 3x + 2y + 4z &= 0 \\ x + 5y + 3z &= -6 \end{aligned}$$

Find the unique solution to this system of equations. Give your answer as a point.

Correct Answers:

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

Problem 4. (1 point) CUNY/CityTech/CollegeAlgebra_Trig/3x3-Systems/non-integer.pg

$$-x - 16y - 5z = -9$$

$$-5x + 20y + 5z = -20$$

$$x - 16y - 3z = 1$$

Find the unique solution to this system of equations. Give your answer as a point.

- Do not use decimal approximations in your answer.
- Use fractions instead.

Correct Answers:

- $\left(5, \frac{1}{4}, 0\right)$

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