MAC1140 SEC29 HW 10-19-2007 10.2 10.3

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Due: 10-21-2007

Full Name: Sec#: Extra Credit Attempted?

[10.2.1PT]Select the type of solution for the following system

1. $$\begin{cases} 4x - y + 2z = 3 \\ -4x + y - 3z = -10 \\ 8x - 2y + 9z = -1 \end{cases}$$

- ○ Unique solution
- ○ None of these
- ○ Exactly three solutions
- ○ Infinitely many solutions
- ○ No solution

2. [10.3.2PT]Choose the type of solution for the linear system having the following augmented matrix

$$\left[\begin{array}{ccc|c} 1 & 0 & 0 & -2 \\ 0 & 0 & 1 & \frac{1}{2} \\ 0 & 0 & 0 & -1 \end{array}\right]$$

- ○ Infinitely many solutions
- ○ None of these
- ○ Exactly three solutions
- ○ Unique solution
- ○ No solution

3. [10.3.4aPT]Choose the correct x, y, or z value for the solution of the system

$$\begin{cases} 3x + 2y - z = -7 \\ 2x - y - z = 3 \\ x + 3y - 2z = -6 \end{cases}$$

○ $z = -2$
○ $z = -1$
○ $y = 2$
○ $y = 1$
○ $x = -4$

4.

[10.3.4aPT]Choose the correct x, y, or z value for the solution of the system

$$\begin{cases} -2x - 4y + 2z = -8 \\ -x - 5y + 12z = -5 \\ 3x + 5y - z = 10 \end{cases}$$

○ $y = 4$
○ $y = -1$
○ $x = 1$
○ $z = 0$
○ $z = 3$

5.

[10.3.5aPT]Select the matrix obtained by applying the row operation $\mathbf{R_1} = \mathbf{r_2} + \mathbf{r_1}$ to

$$\begin{bmatrix} 1 & -1 & 1 & 8 \\ 0 & 1 & -12 & -15 \\ 0 & 5 & -3 & -18 \end{bmatrix}$$

○ $\begin{bmatrix} 1 & -1 & 1 & 8 \\ 0 & 1 & -12 & -15 \\ 0 & 0 & 57 & 57 \end{bmatrix}$
○ $\begin{bmatrix} 1 & 0 & -11 & -7 \\ 0 & 1 & -12 & -15 \\ 0 & 5 & -3 & -18 \end{bmatrix}$
○ $\begin{bmatrix} 1 & -1 & 1 & 8 \\ 1 & 0 & -11 & -7 \\ 0 & 5 & -3 & -18 \end{bmatrix}$

- $\begin{bmatrix} 1 & -1 & 1 & 8 \\ 0 & 1 & -12 & -15 \\ 1 & 0 & -11 & -7 \end{bmatrix}$