SATPREP Name_____

Assignment : System of Equations

Date_____

Find the reduced row-echelon form for each system of linear equations.

1) $-5x - y + z = -21$
$-x - y = -4$
$5x - 4y + 2z = 18$

2) $-3x - 2y - 4z = 2$
$5y + 5z = -15$
$x + 2y + 5z = -14$

3) $-x - 3y - z = 2$
$x + 4z = -8$
$5x - y - z = -20$

4) $4x - 4y = -4$
$-4x - 4y + 3z = -21$
$x + 5y - 4z = 9$

5) $5x + 3y + 2z = -22$
$5x + 3y - 3z = -2$
$x - 4z = 15$

6) $3x - z = 0$
$3x + 3y - 5z = 15$
$-4x + y - 5z = 20$

7) $-2x - 5y - 5z = -8$
$y - 4z = 15$
$-4x - 5y - 4z = -19$

8) $3y - 4z = -15$
$x + 3y + 2z = -1$
$-2x + 5y - 2z = -3$

9) $-4x - 2y = 10$
$5x + y - z = -22$
$3x - 3y + 3z = -6$

10) $3x + 4y - 2z = -3$
$4x + 4y + 4z = 12$
$-2y + z = 6$

Answers to Assignment : System of Equations

1) $\left[\begin{array}{ccc|c} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & -1 \end{array}\right]$

2) $\left[\begin{array}{ccc|c} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & -4 \end{array}\right]$

3) $\left[\begin{array}{ccc|c} 1 & 0 & 0 & -4 \\ 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & -1 \end{array}\right]$

4) $\left[\begin{array}{ccc|c} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 5 \\ 0 & 0 & 1 & 5 \end{array}\right]$

5) $\left[\begin{array}{ccc|c} 1 & 0 & 0 & -1 \\ 0 & 1 & 0 & -3 \\ 0 & 0 & 1 & -4 \end{array}\right]$

6) $\left[\begin{array}{ccc|c} 1 & 0 & 0 & -1 \\ 0 & 1 & 0 & 1 \\ 0 & 0 & 1 & -3 \end{array}\right]$

7) $\left[\begin{array}{ccc|c} 1 & 0 & 0 & 4 \\ 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & -3 \end{array}\right]$

8) $\left[\begin{array}{ccc|c} 1 & 0 & 0 & -4 \\ 0 & 1 & 0 & -1 \\ 0 & 0 & 1 & 3 \end{array}\right]$

9) $\left[\begin{array}{ccc|c} 1 & 0 & 0 & -4 \\ 0 & 1 & 0 & 3 \\ 0 & 0 & 1 & 5 \end{array}\right]$

10) $\left[\begin{array}{ccc|c} 1 & 0 & 0 & 3 \\ 0 & 1 & 0 & -2 \\ 0 & 0 & 1 & 2 \end{array}\right]$