the given system is:

$$x - 5y + 4z = -3$$
$$2x - y - 7z = 1$$
$$-2x - 7y + 3z = -2$$

then the corresponding augmented matrix is given by;

$$\begin{pmatrix} 1 & -5 & 4 & -3 \\ -2 & -7 & 3 & -2 \\ 2 & -1 & -7 & 1 \end{pmatrix}$$

Now applying the elementary row operation on the above to have Reduced Echelon form

By $R_2' \longrightarrow R_2 + 2R_1, R_3' \longrightarrow R_3 - 2R_1$

$$\begin{pmatrix} 1 & -5 & 4 & -3 \\ 0 & -17 & 11 & -8 \\ 0 & 9 & -15 & 7 \end{pmatrix}$$

By $R_2' \longrightarrow \left(\frac{-1}{17}\right)R_2$

$$\begin{pmatrix} 1 & -5 & 4 & -3 \\ 0 & 1 & -\frac{11}{17} & \frac{8}{17} \\ 0 & 9 & -15 & 7 \end{pmatrix}$$

By $R_1' \longrightarrow R_1 + 5R_2, R_3' \longrightarrow R_3 - 9R_2$

$$\begin{pmatrix} 1 & 0 & \frac{13}{17} & -\frac{11}{17} \\ 0 & 1 & -\frac{11}{17} & \frac{8}{17} \\ 0 & 0 & -\frac{156}{17} & \frac{47}{17} \end{pmatrix}$$

By $R_3' \longrightarrow \left(-\frac{17}{156}\right)R_3$

$$\begin{pmatrix} 1 & 0 & \frac{13}{17} & -\frac{11}{17} \\ 0 & 1 & -\frac{11}{17} & \frac{8}{17} \\ 0 & 0 & 1 & -\frac{47}{156} \end{pmatrix}$$

By $R_2' \longrightarrow R_2 + \frac{11}{17}R_3, R_1' \longrightarrow R_1 - \frac{13}{17}R_2$

$$\begin{pmatrix} 1 & 0 & 0 & -\frac{5}{12} \\ 0 & 1 & 0 & \frac{43}{156} \\ 0 & 0 & 1 & -\frac{47}{156} \end{pmatrix}$$

i.e. that required matrix in Reduced Echelon form

$\therefore \Longrightarrow \left\{x = -\frac{5}{12}, y = \frac{43}{156}, z = -\frac{47}{156}\right\}$ is the required solution.