$$-\frac{2}{3}x + \frac{1}{2}y = -3$$

$$\frac{3}{23/16}$$

$$\frac{1}{4}x - y = \frac{11}{4}$$

$$\frac{1}{4}$$

$$\frac{1}{4}$$

Step D: Check the deferminant.

$$\begin{bmatrix} -2/3 & \frac{1}{2} & : -3 \\ \frac{1}{4} & -1 & : \frac{11}{4} \end{bmatrix} = \frac{2}{3} - \frac{1}{8} \neq 0.$$

$$= \frac{16}{24} - \frac{3}{24} = \frac{1^3}{24}.$$

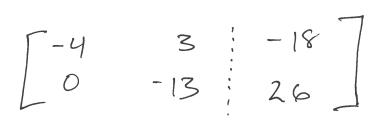
Step !: Clear fractions from the matrix.

Multiply row 1 (R1) by 6, multiply R2 by 4

[-4 3:-18]

Add R, to Y.Rz: (4Rz+R1)

Step 3: -4 3: -18
Clear Column. 4.(1)+(-4) =4.4+3: 4.11+(-18)



Simplification Step (optional): Get rid of common factors in a row.

Multiply the second row (Rz) by 13.

Step 4: Select the first non-zero number in the second row as a pivot.

Step 5: Clear the second column as in Step 3.

$$\begin{bmatrix} -4+3.0 & 3+3(-1) & 1 & -18+3(2) \\ 0 & -1 & 1 & 2 \\ 0 & -1 & 2 \end{bmatrix}$$

33-56=-23

Final Step: Simplify TR, and -IRz 6.-1 -1.-1 2.-1 0 : 3 The Augmented Matrix is the system 1. X + 0. y = 3 (=) X=3 08.x + 1.y = -2 (=) y = -2. $-\frac{2}{3}(3)+\frac{1}{2}(-2)=-2-1=-3.$ L(3) -(2) = 3 + 2 = 3 + 8 = 11.

E.g:
$$x - y + 5z = 6$$

 $3x + 3y - z = 10$
 $x + 3y + 7z = 5$

$$\frac{1}{23}R_{3} \qquad 3 \qquad 7 \qquad -4$$

$$0 \qquad 3 \qquad -8 \qquad 14$$

$$0 \qquad 0 \qquad 1 \qquad 188-1$$

$$\frac{1}{3}$$
 $\frac{1}{3}$ $\frac{1}$