

3.6

$$Ux = y$$

$$\begin{bmatrix} -5 & 2 & -1 \\ 0 & 11/5 & 33/5 \\ 0 & 0 & 2 \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \\ x_3 \end{bmatrix} = \begin{bmatrix} 1 \\ -2 \\ -2 \end{bmatrix}$$

$$2x_3 = -2,$$

$$x_3 = -1$$

$$\frac{11}{5}x_2 + \frac{33}{5}x_3 = -2,$$

$$x_2 = \frac{5}{11} \left(-2 - \frac{33}{5} \right) \approx -3.909$$

$$-5x_1 + 2x_2 - x_3 = 1, \quad x_1 \approx -\frac{1}{5} \left(1 - 2(-3.909) - 1 \right)$$

$$\approx -1.564$$

$$x = \begin{bmatrix} -1 \\ -3.909 \\ -1.564 \end{bmatrix}$$