

3.6

$$Ux = y$$

$$\begin{bmatrix} -5 & 2 & -1 \\ 0 & \frac{11}{5} & \frac{27}{5} \\ 0 & 0 & \frac{20}{11} \end{bmatrix} \begin{bmatrix} x_1 \\ x_2 \\ x_3 \end{bmatrix} = \begin{bmatrix} 2 \\ \frac{11}{5} \\ -2 \end{bmatrix}$$

$$x_3 = \frac{11}{20} \cdot -2 = -\frac{22}{20}$$

$$\frac{11}{5}x_2 + \frac{27}{5}x_3 = \frac{11}{5}$$

$$x_2 = \frac{5}{11} \left(\frac{11}{5} + \frac{27}{5} \cdot \frac{22}{20} \right) = 3.7$$

$$-5x_1 + 2x_2 - x_3 = -2, \quad x_1 = -\frac{1}{5} \left(-2 - 2 \cdot 3.7 - \frac{22}{20} \right)$$

$$= 10.5$$

$$x = \begin{bmatrix} -1.1 \\ 3.7 \\ 10.5 \end{bmatrix}$$