

3.6

$$L y = P b$$

$$\begin{bmatrix} 1 & 0 & 0 \\ -\frac{3}{5} & 1 & 0 \\ -\frac{1}{5} & \frac{2}{11} & 1 \end{bmatrix} \begin{bmatrix} y_1 \\ y_2 \\ y_3 \end{bmatrix} = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 0 & 1 \\ 0 & 1 & 0 \end{bmatrix} \begin{bmatrix} 2 \\ -2 \\ 1 \end{bmatrix} = \begin{bmatrix} 2 \\ 1 \\ -2 \end{bmatrix}$$

$$y_1 = 2$$

$$-\frac{3}{5}y_1 + y_2 = 1$$

$$y_2 = \frac{5}{5} + \frac{6}{5} = \frac{11}{5}$$

$$-\frac{1}{5}y_1 + \frac{2}{11}y_2 + y_3 = -2$$

$$y_3 = -2 + \frac{1}{5}y_1 - \frac{2}{11}y_2$$

$$= -\frac{10}{5} + \frac{2}{5} - \frac{2}{5} = -2$$