

$$M_{11} = \begin{vmatrix} 0.5 & 0 \\ -0.8 & 0.8 \end{vmatrix} = 0.4$$

$$M_{12} = \begin{vmatrix} -0.25 & 0 \\ 0 & 0.8 \end{vmatrix} = -0.2$$

$$M_{13} = \begin{vmatrix} -0.25 & 0.5 \\ 0 & -0.8 \end{vmatrix} = 0.2$$

$$M_{21} = \begin{vmatrix} -0.5 & -0.8 \\ -0.8 & 0.8 \end{vmatrix} = -0.4 + 0.64 = -1.04 \rightarrow C_{21} = (-1)^3(-1.04) = 1.04$$

$$M_{22} = \begin{vmatrix} 0.9 & -0.8 \\ 0 & 0.8 \end{vmatrix} = 0.72$$

$$M_{23} = \begin{vmatrix} 0.9 & -0.5 \\ 0 & -0.8 \end{vmatrix} = -0.72$$

$$M_{31} = \begin{vmatrix} -0.5 & -0.8 \\ 0.5 & 0 \end{vmatrix} = 0.4$$

$$M_{32} = \begin{vmatrix} 0.9 & -0.8 \\ -0.5 & 0 \end{vmatrix} = -0.2$$

$$M_{33} = \begin{vmatrix} 0.9 & -0.5 \\ -0.5 & 0.5 \end{vmatrix} = 0.45 - 0.25 = 0.2 \rightarrow C_{33} = (-1)^6(0.325) = 0.325$$

$$\rightarrow C_{11} = (-1)^2 \cdot 0.4 = 0.4$$

$$\rightarrow C_{12} = (-1)^3 \cdot (-0.2) = 0.2$$

$$\rightarrow C_{13} = (-1)^4(0.2) = 0.2$$

$$\rightarrow C_{22} = (-1)^4(0.72) = 0.72$$

$$\rightarrow C_{23} = (-1)^5(-0.72) = 0.72$$

$$\rightarrow C_{31} = (-1)^4(0.4) = 0.4$$

$$\rightarrow C_{32} = (-1)^5(-0.2) = 0.2$$

$$C = \begin{pmatrix} 0.4 & 0.2 & 0.2 \\ 1.04 & 0.72 & 0.72 \\ 0.4 & 0.2 & 0.325 \end{pmatrix} \rightarrow C' = \begin{pmatrix} 0.4 & 1.04 & 0.4 \\ 0.2 & 0.72 & 0.2 \\ 0.2 & 0.72 & 0.325 \end{pmatrix}$$

$$\frac{1}{0.1} \cdot C' = 10 \cdot C' = \begin{pmatrix} 4 & 10.4 & 4 \\ 2 & 7.2 & 2 \\ 2 & 7.2 & 3.25 \end{pmatrix} = A^{-1}$$

$$A^{-1} \cdot \begin{pmatrix} 20 \\ 0 \\ 20 \end{pmatrix} = \begin{pmatrix} 4 & 10.4 & 4 \\ 2 & 7.2 & 2 \\ 2 & 7.2 & 3.25 \end{pmatrix} \begin{pmatrix} 20 \\ 0 \\ 20 \end{pmatrix} = \begin{pmatrix} 80 + 80 \\ 40 + 40 \\ 40 + 65 \end{pmatrix} = \begin{pmatrix} 160 \\ 80 \\ 105 \end{pmatrix} = \begin{pmatrix} x_A \\ x_E \\ x_S \end{pmatrix}$$

(3) (3)

(2) (0)