

$$\tilde{A}^{(3)} = \begin{bmatrix} 1 & 1 & -2 & 1 & 3 & -1 & 4 \\ 0 & 1 & -0.5 & -1 & -0.5 & 1 & -9.5 \\ 0 & 0 & 1.167 & -1 & -2.167 & 0.67 & -5.5 \\ 0 & 0 & 2.5 & -3 & -1.85 & 3 & -17.167 \\ 0 & 0 & 1.497 & -3.497 & -5.497 & 1 & -23.493 \\ 0 & 0 & 8.5 & -11 & -15.5 & 3 & -52.5 \end{bmatrix}$$

Divide through E_1 by 2.5 and swap with E_3

$$\tilde{A}^{(4)} = \begin{bmatrix} 1 & 1 & -2 & 1 & 3 & -1 & 4 \\ 0 & 1 & -0.5 & -1 & -0.5 & 1 & -9.5 \\ 0 & 0 & 1 & -1.2 & -1.93 & 1.2 & -6.867 \\ 0 & 0 & 1.167 & -1 & -2.167 & 0.67 & -5.5 \\ 0 & 0 & 1.497 & -3.497 & -5.497 & 1 & -23.493 \\ 0 & 0 & 8.5 & -11 & -15.5 & 3 & -52.5 \end{bmatrix}$$

$$A = \begin{bmatrix} 1 & 1 & -2 & 1 & 3 & -1 & 4 \\ 0 & 1 & -0.5 & -1 & -0.5 & 1 & -9.5 \\ 0 & 0 & 1 & -1.2 & -1.93 & 1.2 & -6.867 \\ 0 & 0 & 0 & 0.343 & 0.076 & -0.428 & 0.154 \\ 0 & 0 & 0 & -1.465 & -1.734 & -5.33 & -8.805 \\ 0 & 0 & 0 & -0.094 & 0.109 & -0.247 & 0.611 \end{bmatrix}$$

Divide through E_1 by 0.343

$$\tilde{A}^{(5)} = \begin{bmatrix} 1 & 1 & -2 & 1 & 3 & -1 & 4 \\ 0 & 1 & -0.5 & -1 & -0.5 & 1 & -9.5 \\ 0 & 0 & 1 & -1.2 & -1.93 & 1.2 & -6.867 \\ 0 & 0 & 0 & 1 & 0.22 & -1.831 & 6.280 \\ 0 & 0 & 0 & 0 & 0.951 & 2.194 & -0.282 \\ 0 & 0 & 0 & 0 & -1.882 & 10.842 & -13.631 \end{bmatrix}$$

Divide through E_5 by 0.951

$$= \begin{bmatrix} 1 & 1 & -2 & 1 & 3 & -1 & 4 \\ 0 & 1 & -0.5 & -1 & -0.5 & 1 & -9.5 \\ 0 & 0 & 1 & -1.2 & -1.93 & 1.2 & -6.867 \\ 0 & 0 & 0 & 1 & 0.222 & -1.83 & 6.280 \\ 0 & 0 & 0 & 0 & 1 & 2.28 & -0.244 \\ 0 & 0 & 0 & 0 & 0 & -10.33 & 10.57 \end{bmatrix}$$