

$$A = \begin{pmatrix} 2 & 1 & 0 \\ 4 & 3 & 1 \\ 1 & 1 & 1 \end{pmatrix} \quad m_{21} = \frac{4}{2} = 2 \quad m_{31} = \frac{1}{2} \quad B = \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$$

$$A^{(1)} = \begin{pmatrix} 2 & 1 & 0 \\ 0 & 1 & 1 \\ 0 & \frac{1}{2} & 1 \end{pmatrix} \quad m = \frac{1}{2} \quad B = \begin{pmatrix} 1 & 0 & 0 \\ -2 & 1 & 0 \\ -1/2 & 0 & 1 \end{pmatrix}$$

$$A^{(2)} = \begin{pmatrix} 2 & 1 & 0 \\ 0 & 1 & 1 \\ 0 & 0 & 1/2 \end{pmatrix} \quad B = \begin{pmatrix} 1 & 0 & 0 \\ -2 & 1 & 0 \\ 1/2 & -1/2 & 1 \end{pmatrix}$$

$$\begin{aligned} 2x + y &= 1 & 0 & 0 \\ y + z &= -2 & 1 & 0 \\ 1/2 z &= 1/2 & -1/2 & 1 \end{aligned}$$

$$\begin{aligned} 2x + y &= 1 & 0 & 0 \\ y + z &= -2 & 1 & 0 \\ z &= 1 & -1 & 2 \end{aligned}$$

$$\begin{aligned} 2x + y &= 1 & 0 & 0 \\ y &= -3 & 2 & -2 \\ z &= 1 & -1 & 2 \end{aligned}$$

$$\begin{aligned} 2x &= 4 & -2 & 2 \\ y &= -3 & 2 & -2 \\ z &= 1 & -1 & 2 \end{aligned}$$

$$\begin{aligned} x &= 2 & -1 & 1 \\ y &= -3 & 2 & -2 \\ z &= 1 & -1 & 2 \end{aligned}$$