

Assignment 4

$$\begin{aligned} 10M_1 - 2M_2 + M_3 &= 9 \\ -2M_1 + 10M_2 - 2M_3 &= 12 \\ -2M_1 - 5M_2 + 10M_3 &= 18 \end{aligned}$$

$$\text{Initial } M_0 = [0, 0, 0]$$

$$M_1 = \frac{M_2}{5} - \frac{M_3}{10} + 0.9$$

$$M_2 = \frac{M_1}{5} + \frac{M_3}{3} + 1.2$$

$$M_3 = \frac{M_1}{5} + \frac{M_2}{2} + 1.8$$

①

$$M_1 = 0.2(0) - 0.1(0) + 0.9 = 0.9$$

$$M_2 = 0.2(0) + 0.2(0) + 1.2 = 1.2$$

$$M_3 = 0.2(0) + 0.5(0) + 1.8 = 1.8$$

②

$$M_1 = 0.2(1.2) - 0.1(1.8) + 0.9 = 0.96$$

$$M_2 = 0.2(0.9) + 0.2(1.8) + 1.2 = 1.74$$

$$M_3 = 0.2(0.9) + 0.5(1.2) + 1.8 = 2.58$$

$$M_1 = 0.2(1.74) - 0.1(2.58) + 0.9 = 0.99$$

$$M_2 = 0.2(0.99) + 0.2(2.58) + 1.2 = 1.908$$

$$M_3 = 0.2(0.99) + 0.5(1.74) + 1.8 = 2.862$$

$$M_1 = 0.2(1.908) - 0.1(2.862) + 0.9 = 0.9954$$

$$M_2 = 0.2(0.99) + 0.2(2.862) + 1.2 = 1.9704$$

$$M_3 = 0.2(0.99) + 0.5(1.908) + 1.8 = 2.952$$