

$$5 - \frac{1}{4}u_1 = -\bar{u}_1(0) + 40$$

$$-5 + \frac{u_1}{2} - \frac{u_2}{4} = 80$$

$$-\frac{u_1}{4} + \frac{u_2}{2} - \frac{u_3}{4} = 80$$

$$-\frac{u_2}{4} + \frac{u_3}{2} - q = 80$$

$$-\frac{u_3}{4} + q = \bar{u}_4(16) + 40$$

$$\bar{u}_1(0) = 161$$

$$u_1 = 504$$

$$u_2 = 668$$

$$u_3 = 512$$

$$\bar{u}_4(16) = -159$$