④

$$u_{i+1} = u_i + u'(x_i)h + u''(x_i)\frac{h^2}{2!}$$

$$u_{i+2} = u_i + 2hu'(x_i) + 2h^2 u''(x_i)$$

$$u'(x_i)h = au_i + bu_{i+1} + cu_{i+2}$$

$$u'(x_i)h = au_i + b\left[u_i + u'(x_i)h + u''(x_i)\frac{h^2}{2}\right] + c\left[u_i + 2hu'(x_i) + 2h^2 u''(x_i)\right]$$

$$u'(x_i)h = (a)u_i + (b)u_i + (b)u'(x_i)h + (b)u''(x_i)\frac{h^2}{2} + (c)u_i + (c)2hu'(x_i) + (c)2h^2 u''(x_i)$$

$$a + b + c = 0$$

$$b + 2c = 1$$

$$\frac{b}{2} + 2c = 0$$

$$\boxed{a = -\tfrac{3}{2}, \quad b = 2, \quad c = -\tfrac{1}{2}}$$