

$$\begin{aligned} \underline{1} \quad S_0(x) &= \frac{a_0}{6h}(x_1 - x)^3 + \frac{a_1}{6h}(x - x_0)^3 + b_0(x_1 - x) + c_0(x - x_0) \\ &= -4x^3 + b_0(1/2 - x) + c_0x \end{aligned}$$

$$b_0 = \frac{f_0}{h} - \frac{a_0h}{6}, \quad c_0 = \frac{f_1}{h} - \frac{a_1h}{6}$$

$$b_0 = 0, \quad c_0 = 2 + 1 = 3$$

$$\boxed{S_0(x) = -4x^3 + 3x}$$

$$\begin{aligned} S_1(x) &= \frac{a_1}{6h}(x_2 - x)^3 + \frac{a_2}{6h}(x - x_1)^3 + b_1(x_2 - x) + c_1(x - x_1) \\ &= -4(1 - x)^3 + b_1(1 - x) + c_1(x - 1/2) \end{aligned}$$

$$b_1 = \frac{f_1}{h} - \frac{a_1h}{6}$$

$$= 2 + 1 = 3$$

$$\boxed{S_1(x) = -4(1 - x)^3 + 3(1 - x)}$$