3
b

$$\longrightarrow P_3(x) = f[x_0] + f[x_0, x_1](x - x_0) + \cdots$$

$$\cdots + f[x_0, x_1, x_2](x - x_0)(x - x_1) + \cdots$$

$$\cdots + f[x_0, \ldots, x_3](x - x_0)(x - x_1)(x - x_2)$$

$$= 1 + 1.71828(x - 1) + 1.47625(x - 1)(x - e) + \cdots$$

$$\cdots + 4.83499(x - 1)(x - e)(x - e^2)$$

$$P_3(x) = a_0 + (x - x_0)\left(a_1 + (x - x_1)\left(a_2 + a_3(x - x_2)\right)\right)$$

$$= 1 + (x - 1)\left(1.71828 + (x - e)\left(1.47625 + 4.83499(x - e^2)\right)\right)$$