

$$f(-\frac{1}{5})=A, f(-\frac{1}{10})=B, f(0)=C, f(\frac{1}{10})=D, f(\frac{1}{5})=E \quad \text{とある.}$$

$$f(x)=ax^4+bx^3+cx^2+dx+e \quad \text{とある.}$$

$$f'(x)=4ax^3+3bx^2+2cx+d, f'(0)=d$$

$$f(0)=C=e$$

$$\left\{ \begin{aligned} f(-\frac{1}{5})=A &= \frac{a}{625} - \frac{b}{125} + \frac{c}{25} - \frac{d}{5} + C \\ f(\frac{1}{5})=E &= \frac{a}{625} + \frac{b}{125} + \frac{c}{25} + \frac{d}{5} + C \end{aligned} \right.$$

$$\left\{ \begin{aligned} f(-\frac{1}{10})=B &= \frac{a}{10000} - \frac{b}{1000} + \frac{c}{100} - \frac{d}{10} + C \\ f(\frac{1}{10})=D &= \frac{a}{10000} + \frac{b}{1000} + \frac{c}{100} + \frac{d}{10} + C \end{aligned} \right.$$

$$E-A = \frac{2b}{125} + \frac{2d}{5} \quad \text{--- (1)}$$

$$D-B = \frac{2b}{1000} + \frac{2d}{10} \quad \text{--- (2)}$$

(1) (2) f'1

$$\left\{ \begin{aligned} \frac{1}{8}E - \frac{1}{8}A &= \frac{2b}{1000} + \frac{d}{20} \\ D - B &= \frac{2b}{1000} + \frac{d}{5} \end{aligned} \right.$$

$$D - B - \frac{1}{8}E + \frac{1}{8}A = \frac{3}{20}d, \quad \frac{6}{5}d = A - 8B + 8D - E$$

$$\begin{aligned} &= 2.226 - 8 \times 2.46 + 8 \times 3.009 - 3.32 \\ &= 2.226 - 19.68 + 24.072 - 3.32 \\ &= 3.258 \end{aligned}$$

$$d = \frac{3.258}{1.2} = \frac{3258}{1200} = 2.715$$

$$\therefore \text{よって } f'(0) = 2.715$$

$$\begin{array}{r} 2.46 \\ \times \quad 8 \\ \hline 19.68 \end{array} \quad \begin{array}{r} 3.009 \\ \times \quad 8 \\ \hline 24.072 \end{array} \quad \begin{array}{r} 24.072 \\ + 2.226 \\ \hline 26.298 \end{array} \quad \begin{array}{r} 19.68 \\ \quad 3.32 \\ \hline 23.00 \end{array}$$

$$\begin{array}{r} 2.715 \\ 1200 \overline{) 3258} \\ \underline{2400} \\ 8580 \\ \underline{8400} \\ 1800 \\ \underline{1200} \\ 6000 \\ \underline{6000} \\ 0 \end{array}$$