

$$\int_a^b f(x) dx = \lim_{n \rightarrow \infty} \frac{b-a}{n} \sum_{i=0}^{n-1} f\left(a + i \frac{b-a}{n}\right) \quad (1)$$

$$\begin{aligned} \text{D.C.} \lim_{n \rightarrow \infty} \int_a^b f(x) dx - \frac{b-a}{n} \sum_{i=1}^n f\left(a + i \frac{b-a}{n}\right) \\ = \lim_{n \rightarrow \infty} \frac{b-a}{n} \sum_{i=0}^{n-1} f\left(a + i \frac{b-a}{n}\right) - \frac{b-a}{n} \sum_{i=1}^n f\left(a + i \frac{b-a}{n}\right) \\ = \lim_{n \rightarrow \infty} \frac{b-a}{n} (f(a) - f(b)) \end{aligned}$$

$$\lim_{n \rightarrow \infty} \left[ n \left( \int_a^b f(x) dx - \frac{b-a}{n} \sum_{i=1}^n f\left(a + i \frac{b-a}{n}\right) \right) \right] = \underline{\underline{(b-a)(f(a) - f(b))}}$$

(2)

~~Handwritten scribbles and symbols at the bottom of the page, including the word "D.C." and various mathematical notations.~~