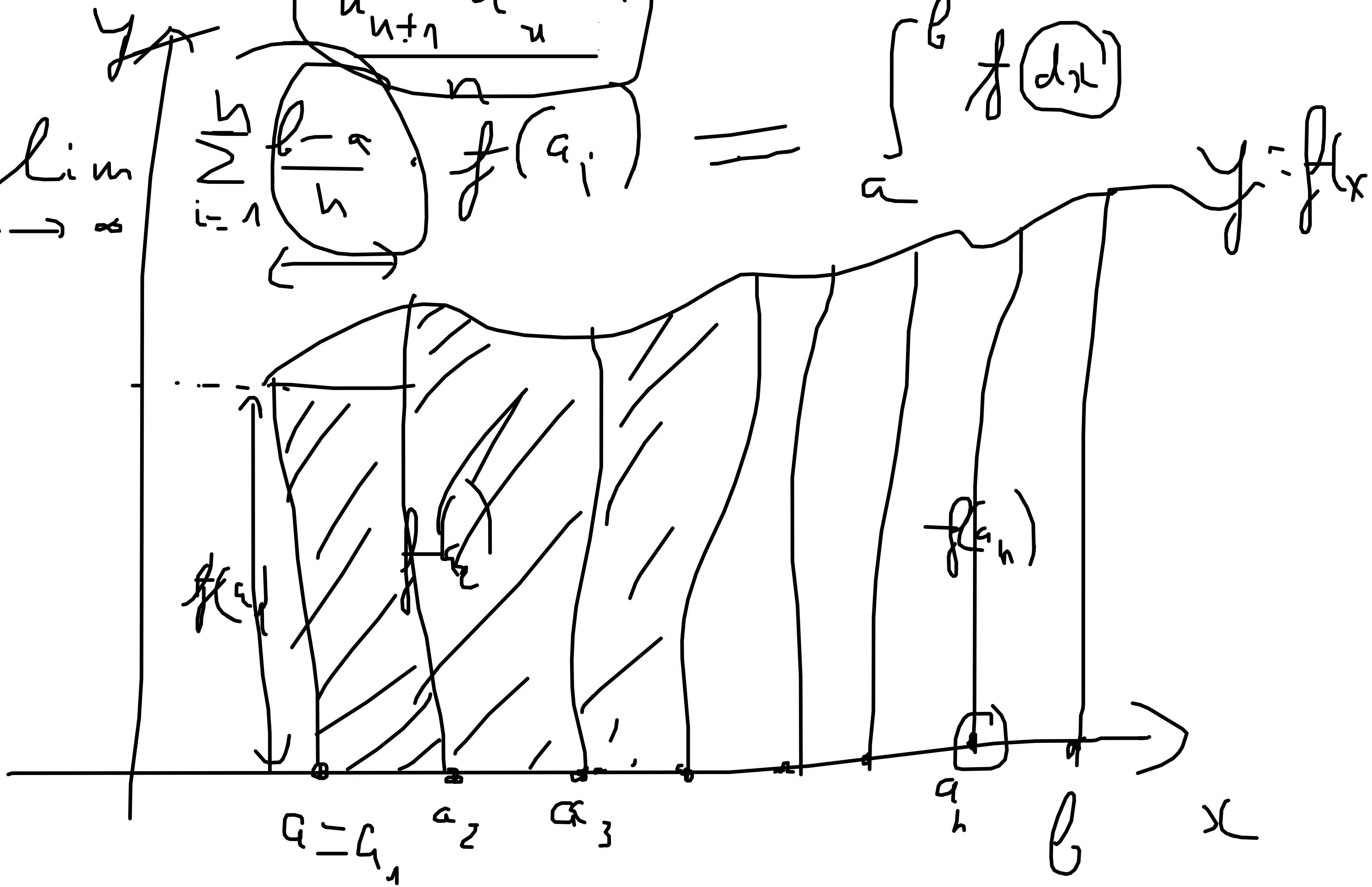
$$\frac{a_{n+1}-a_n}{n}$$

$$\lim_{n\to\infty}\sum_{i=1}^{n}\frac{b-a}{n}\cdot f(a_i) = \int_a^b f(dx)$$

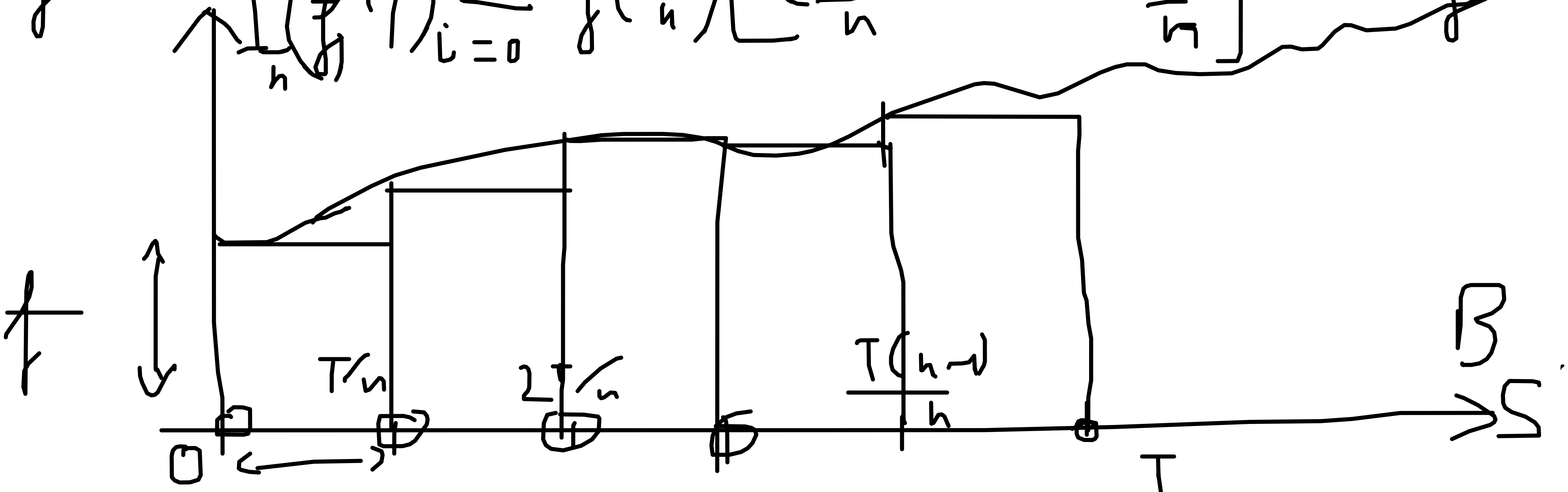


$\{B_t\}$. $f(s)$ $\qquad f(s) = B_s$

$f(s) = s^2$

$$\int_0^T f(s)\, dB_s . \qquad \frac{T}{n}.$$

$$f(s) \quad \frac{1}{n}\left(f(T)\right) \sum_{i=0}^{n-1} f\left(\frac{i}{n}T\right)\left[B_{\frac{(i+1)T}{n}} - B_{\frac{iT}{n}}\right] \quad f$$



$$I(f,T) = \lim_{n\to\infty} I_n(f,T)$$

$$= \lim_{n\to\infty} \sum_{i=0}^{n-1} f\left(\frac{iT}{n}\right) \cdot \left[B_{\frac{(i+1)T}{n}} - B_{\frac{iT}{n}} \right]$$

$$f = \sin, \quad T = 1$$

$$\int_0^1 \sin(x)\, dB_s$$

1) $f(s) = s, \quad T = 1.$

$$I(s, 1) = \lim_{n \to \infty} \sum_{i=0}^{n-1} \frac{i}{n} \cdot \left[B_{\frac{i+1}{n}} - B_{\frac{i}{n}} \right]$$

2) $f(s) = B_s.$

$$I(B_s, T) = \lim_{n \to \infty} \sum_{i=0}^{n-1} B_{\frac{iT}{n}} \cdot \left[B_{\frac{(i+1)T}{n}} - B_{\frac{iT}{n}} \right]$$