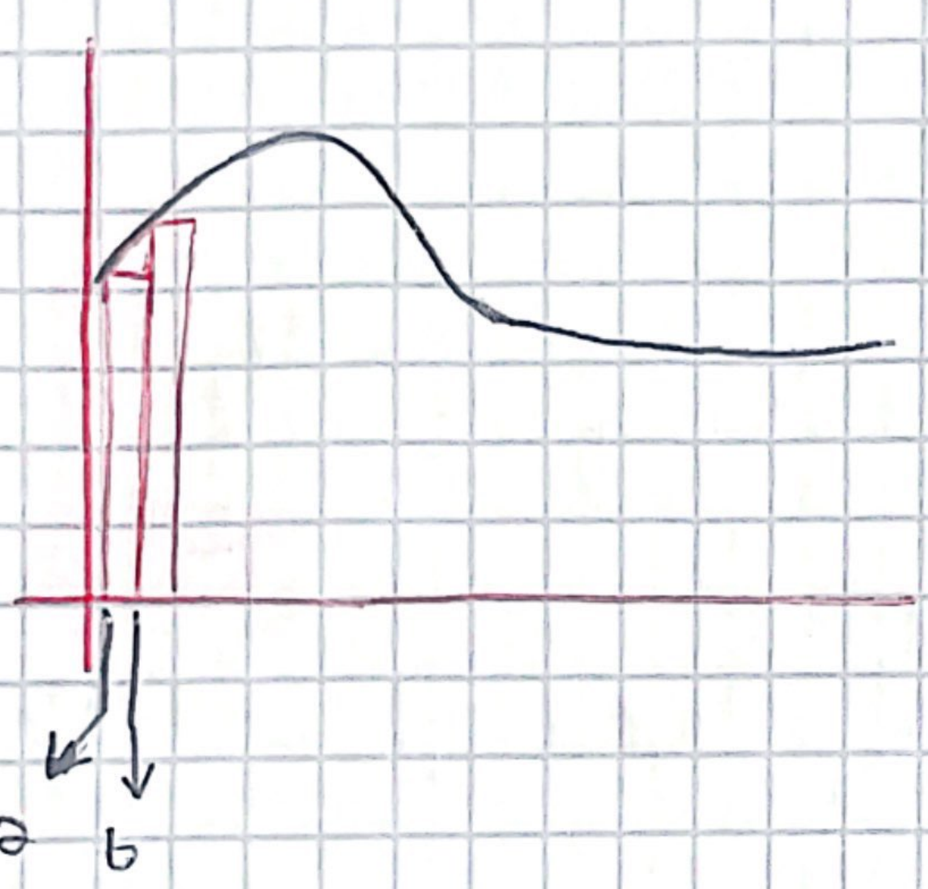
1)



$$\lim_{a \to b} \sum_{i}^{\infty} (b-a)\ f(a_i) = \int_a^b f(x)$$

Áreas:

Cuadrado: base . Altura

Triangulo: (Base . Altura)/2

Base: $b-a$

Altura: $f(a)$ ó $f(b)$

$$\lim_{a \to b} \sum_{i}^{\infty} \underbrace{\frac{b-a}{2}\left(f(b)-f(a)\right)}_{\Delta} + \underbrace{(b-a]\quad f(b)}_{\square}$$

$$\sum_{i}^{\infty} (b_i - a_i) f(a) + \sum_{i}^{\infty} \frac{(b_i-a_i)(f(b)-f(a))}{2}$$

$$\sum_{i}^{\infty} (b_i - a_i)\left[f(a) + \left(\frac{f(b)-f(a)}{2}\right)\right]$$

$$\sum_{i}^{\infty} (b_i - a_i)\left[\frac{f(a)}{2} + \frac{f(b)}{2}\right]$$

$$\sum_{i}^{\infty} \frac{(b-a)}{2}\left(f(a)+f(b)\right) \Big] \Delta$$

Rectangulo:

$(b-a)\ f(b)$

Triangulo:

$\frac{b-a}{2}(f(b)-f(a))$