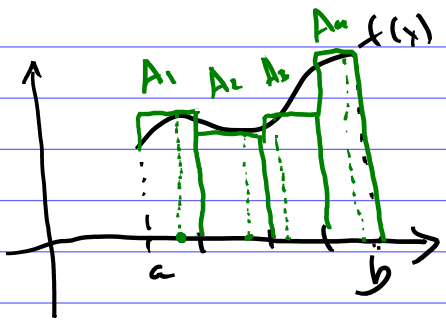
Notação

$$\sum_{i=1}^{3} i = 1 + 2 + 3$$

$$\sum_{i=1}^{3} i^2 = 1^2 + 2^2 + 3^2$$



Área Sob a Curva

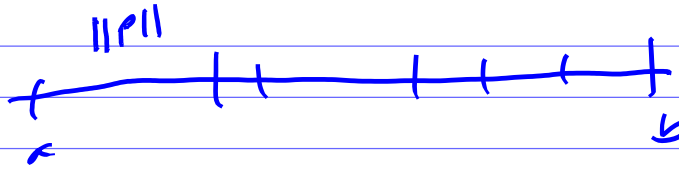
$$A \approx \sum_{i=1}^{n} A_i$$

$$A \approx \sum_{i=1}^{n} f(x_i)\,\Delta x$$

Newton ~
Leibniz ~ $A = \lim_{n \to +\infty} \sum_{i=1}^{n} f(x_i)\Delta x$

$$A = \int_a^b f(x)\,dx$$

O maior tamanho chama-se norma da partição.



$$A = \lim_{\|P\| \to 0} \sum_{i=1}^{n} f(x_i)\Delta x$$

Antiderivada*

$$A = \int f(x)\,dx$$

* No livro: Integral Indefinida

Integral**

$$A = \int_a^b f(x)\,dx$$

** No livro: Integral Definida

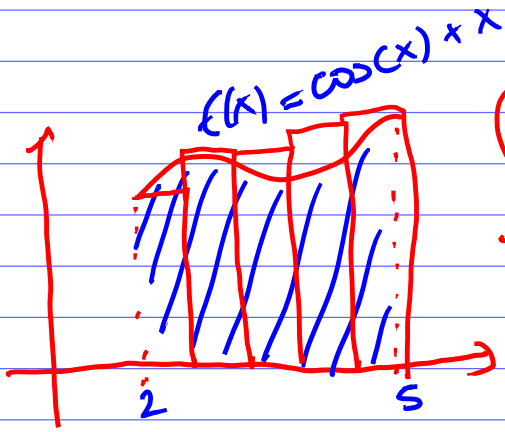
$$= \lim_{n\to\infty} \sum_{i=1}^{n} f(x_i)\Delta x$$

$$= \int_a^b f(x)\,dx$$

$$\int \cos x\,dx = \operatorname{sen} x + c$$

Integral não é um bom nome.

$$\int x^2\,dx = \frac{x^3}{3} + C$$



$$\int_2^5 (\cos x + x)\,dx$$

$$\int_a^b f(x)\,dx$$

$m \cdot m = m^2$ Área

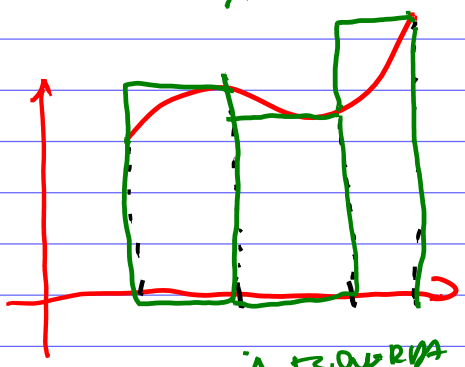
$m^2 \cdot m = m^3$ Volume

$\frac{kg}{m} \cdot m = kg$ Massa

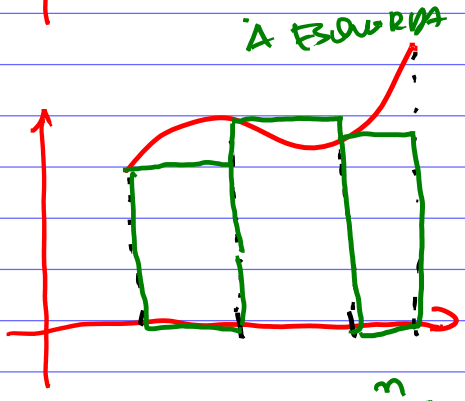
$\frac{C}{m} \cdot m = C$ Carga elétrica

$$A \approx \sum_{i=1}^{n} f(x_i)\,\Delta x$$

A DIREITA



A ESQUERDA



$$A = \lim_{n \to +\infty} \sum_{i=1}^{n} f(x_i)\,\Delta x$$