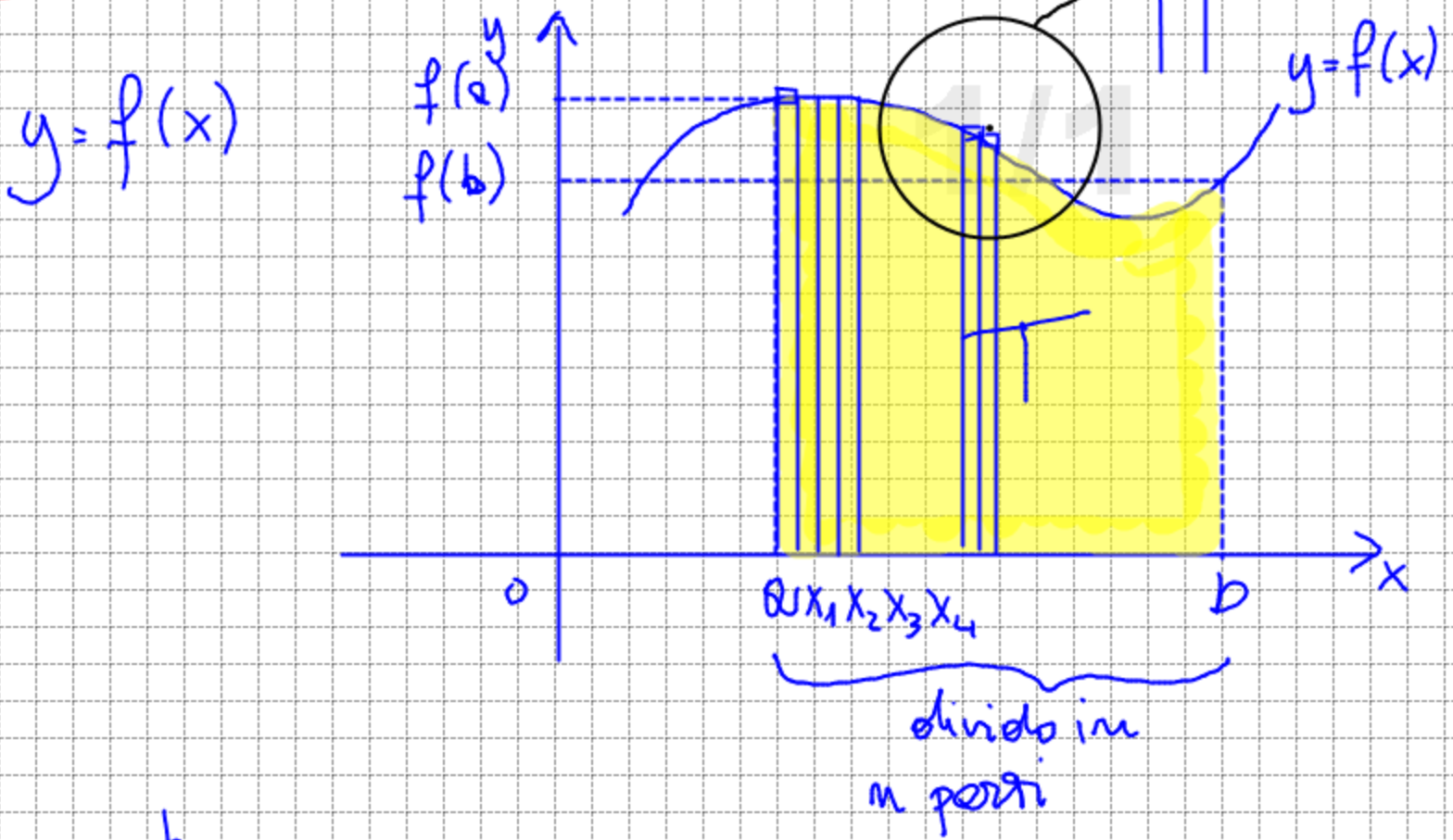


# INTEGRALE DEFINITO



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

$$x_i - x_{i-1} = \frac{b-a}{n}$$

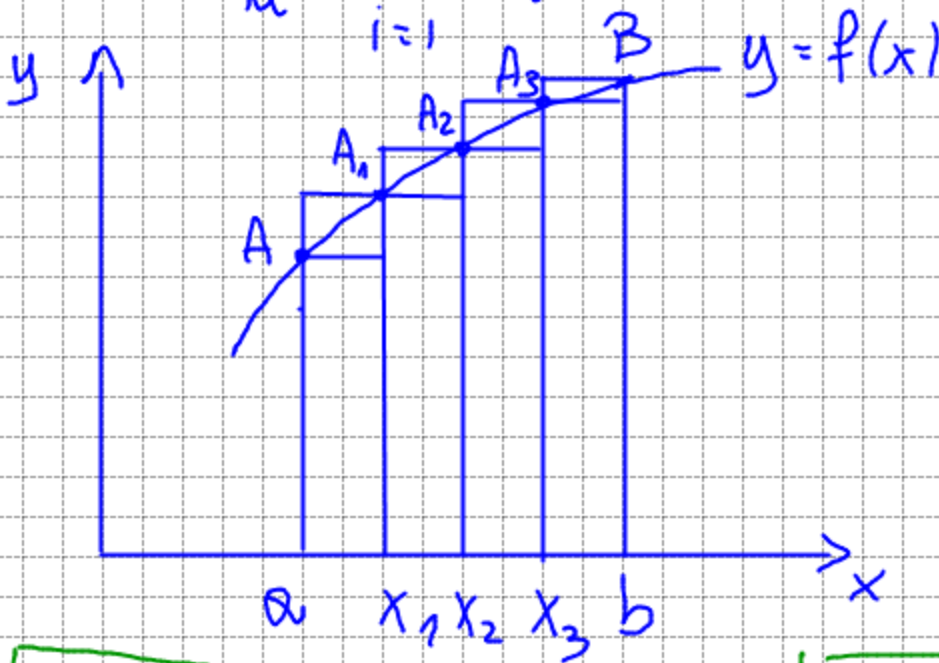
Indico con:

$Q_i$  = area dei rettangoli che si trovano sopra la curva

$$S_m = \sum_{i=1}^m Q_i$$

$q_i$  = area dei rettangoli che si trovano sotto la curva

$$S_m = \sum_{i=1}^m q_i$$



- $A(a, f(a))$
- $A_1(x_1, f(x_1))$
- $A_2(x_2, f(x_2))$
- $A_3(x_3, f(x_3))$
- $B(b, f(b))$

$$Q_1 = (x_1 - a) f(a)$$

$$Q_2 = (x_2 - x_1) f(x_1)$$

$$Q_3 = (x_3 - x_2) f(x_2)$$

$$Q_4 = (b - x_3) f(x_3)$$

$$\frac{b-a}{4}$$

$$Q_1 = (x_1 - a) f(x_1)$$

$$Q_2 = (x_2 - x_1) f(x_2)$$

$$Q_3 = (x_3 - x_2) f(x_3)$$

$$Q_4 = (b - x_3) f(b)$$

$$\frac{b-a}{4}$$

al limite per  $n \rightarrow \infty$

$$\lim_{n \rightarrow \infty} S_m = \lim_{n \rightarrow \infty} S_m = \int_a^b f(x) dx$$