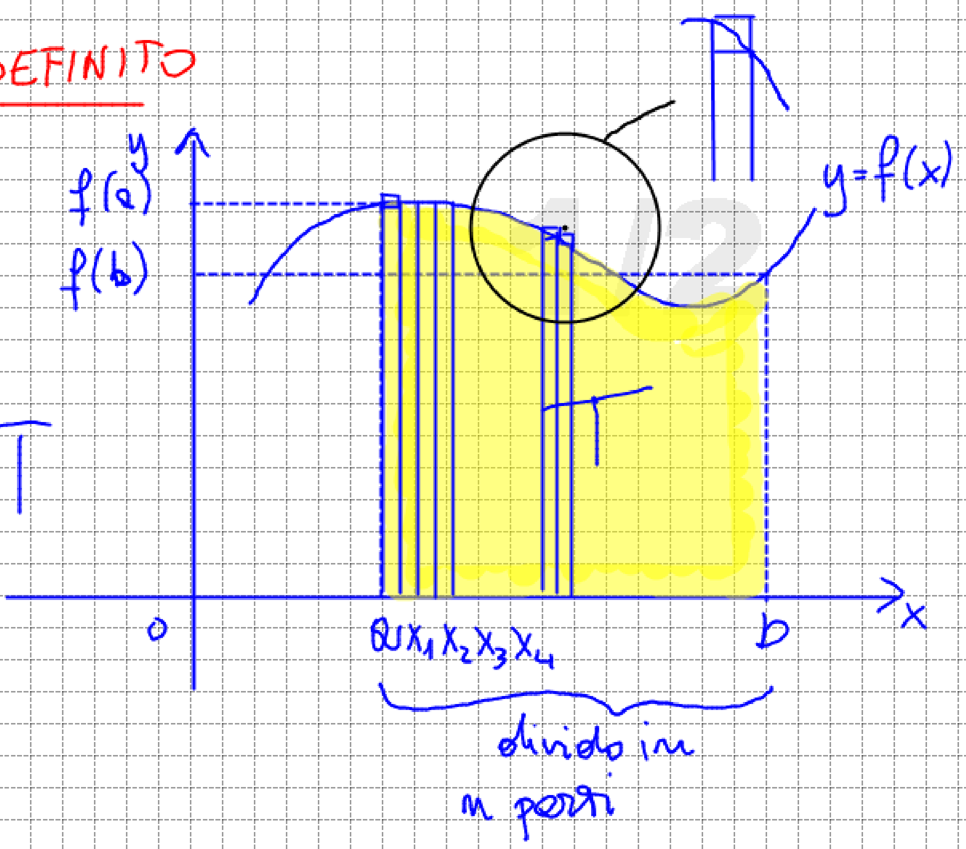
INTEGRALE DEFINITO

$y = f(x)$



$$\sum_{i=1}^{n} R_i = \sum_{i=1}^{n} r_i = T$$

$$T = \int_a^b f(x)\,dx \qquad x_i - x_{i-1} = \frac{b-a}{n}$$

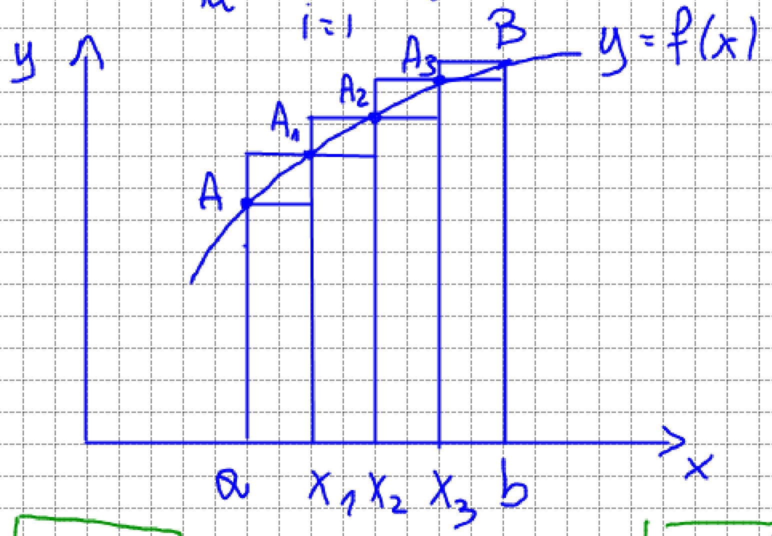
Indico con:

Q_i = area dei rettangoli che si trovano sopra la curva

$$S_n = \sum_{i=1}^{n} Q_i$$

q_i = area dei rettangoli che si trovano sotto la curva

$$s_n = \sum_{i=1}^{n} q_i$$



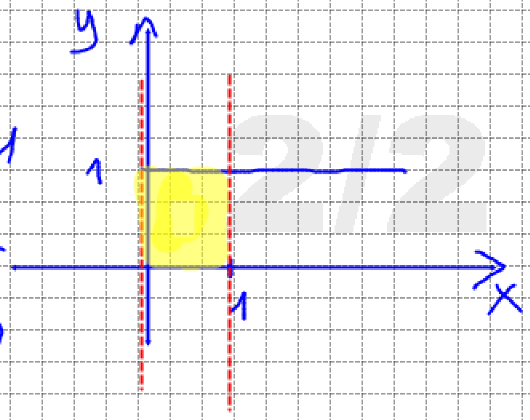
$A(a; f(a))$
$A_1(x_1; f(x_1))$
$A_2(x_2; f(x_2))$
$A_3(x_3; f(x_3))$
$B(b; f(b))$

$q_1 = \boxed{(x_1 - a)}\, f(a)$	$Q_1 = \boxed{(x_1 - a)}\, f(x_1)$
$q_2 = \boxed{(x_2 - x_1)}\, f(x_1)$	$Q_2 = \boxed{(x_2 - x_1)}\, f(x_2)$
$q_3 = \boxed{(x_3 - x_2)}\, f(x_2)$	$Q_3 = \boxed{(x_3 - x_2)}\, f(x_3)$
$b = \boxed{(b - x_3)}\, f(x_3)$	$Q_4 = \boxed{(b - x_3)}\, f(b)$
$= \frac{b-a}{4}$	$= \frac{b-a}{4}$

al limite per $n \to \infty$ $\quad \lim_{n\to+\infty} s_n = \lim_{n\to+\infty} S_n = \int_a^b f(x)\,dx$

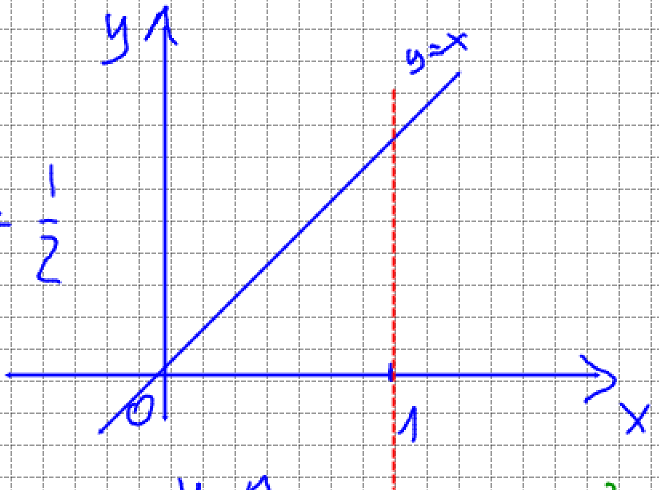
ES

$$\int_0^1 1\,dx = \left[x+c\right]_0^1 =$$



$$= 1+c-(0+c) = 1$$

- $$\int_0^1 x\,dx = \left[\frac{x^2}{2}+c\right]_0^1 = \frac{1}{2}$$



$y=x^2$

- $$\int_0^1 x^2\,dx = \left[\frac{x^3}{3}\right]_0^1 = \frac{1}{3}$$