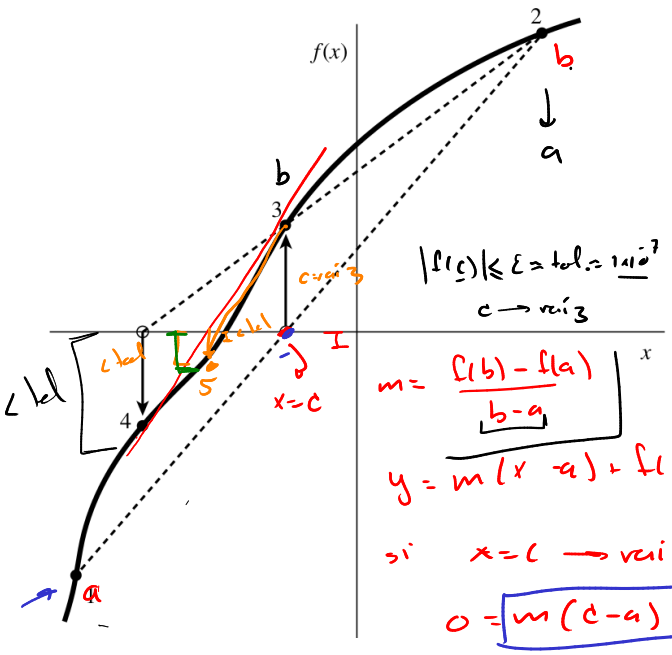


$|f(c)| \leq \varepsilon = tol = 1\times10^{-7}$

$c \to$ raiz

$$m = \frac{f(b)-f(a)}{b-a}$$

$$y = m(x-a) + f(a)$$

si $x = c \to$ raiz

$$0 = \boxed{m(c-a) + f(a)}$$

$$\Rightarrow c = -\frac{f(a)}{m} + a$$

while $|f(c)| > tol$ and $i < max$:

$i += 1$

$a = b$

$b = c$

$m = [f(b) - f(a)] / (b-a)$

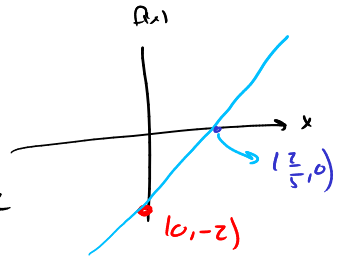
$c = -f(a)/m + a$

$c \to$ raiz

$f(x) = mx + b \to$ reta

$m = 5 > 0$

$b = -2$



$f(0) = b = -2$

$f(x) = 0 = mx + b$

$\Rightarrow x = -\frac{b}{m} = -\frac{(-2)}{5} = \frac{2}{5}$

$$m = \frac{\Delta f(x)}{\Delta x} = \frac{f(x_1) - f(x_0)}{x_1 - x_0}$$

0.5 Final

0.25 Final

int = [0, 1]

a = int[0] → 1

b = int[1] → 2

d_x = - f(a) · (b - a) / (f(a) · f(b))

rts = a + d_x

while abs(d_x) > tol and i < max:

a = b

b = rts → 3

d_x = - f(a) · (b - a) / (f(a) · f(b))

→ rts += d_x

rts → resultado