*;; regula\_falsi.lisp - find root for given function*

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*;;*

*;; :x1 :x2 intervalo em que a raiz vai ser procurada*

*;;*

(defun regula\_falsi(f x1 x2 precisao interacoes)

(**if** (eq interacoes 0)

x1

(**progn**

(**setq** sombra (f x1))

(format t "~%~,10F ~,10F ~,10F ~D" x1 x2 sombra interacoes)

(**if** (and (< sombra precisao) (> sombra (\* precisao -1)))

(**progn** (print "precisao alcancada") chute )

(**progn**

*;encontra a raiz da secante entre os pontos do intervalo x1 x2*

(**setq** chute (/(-(\*(read-from-string (format NIL "~20,20F" x1))(funcall f x2)) (\* x2 (funcall f x1)))(-(funcall f x2)(funcall f x1))) )

(**if** (> (f chute) 0) (**setq** x1 chute) (**setq** x2 chute))

(regula\_falsi f x1 x2 precisao (- interacoes 1))

)

)

)

)

)

*; exemplo de utilização*

*;(defun f(x)(+ (\* x x x) (\* -9 x ) 3 ))*

*;(print (regula\_falsi #'f 0 1 0.00001 20 ))*