

HW 2.5 68

f is defined on (a, b) , $f(c) \neq 0$.

f is conti at c

show f has the same sign as c on $(c-\delta, c+\delta)$

suppose $f(c) > 0$

Case 1.

$f(x) > 0$, done #

Case 2.

suppose $d \in (a, b)$, $d < c$, $f(d) < 0$.

from IVT(?), there is e , $d < e < c$

s.t. $f(e) = 0$

~~$f(\frac{e+c}{2}) > 0$~~ #