```
clc
f = input('f(x)= ', 's');
sf = str2sym(f);
ezplot(sf);
tol = input('tolerancia del metodo = ');
x0 = input('valor inicial = ');
v = symvar(sf);
f1 = diff(sf);

sw = 0;

while (sw==0)

    x1 = x0 – ( subs(sf, v, x0) / subs (f1, v, x0));
    if abs(x0 – x1) > tol
        x0 = x1;
        sw=0;

    else
        sw =1;
    end
end

vpa(x1)
```