

The Secant Method

```
function [ iter ] = mysecant1(f,x0,x1, tol,n)
%UNTITLED3 Summary of this function goes here--please write
% Detailed explanation goes here -please write
%
%
%
%
iter=0;
u=feval(f, x0);
v=feval(f,x1);
err=abs(x1-x0);
disp('-----')
disp('iter      xn      f(xn)      |xn+1-xn| ')
disp('-----')
fprintf('%2.0f  %12.6f  %12.6f\n', iter, x0,u)
fprintf('%2.0f  %12.6f %12.6f %12.6f\n', iter, x1, v, err)
%you can modigy fprintf and diplay more decimal points.
while (err>tol)&(iter<=n)&((v-u)~=0)
    x=x1-v*(x1-x0)/(v-u);
    %see the formula for the secant line method.
    x0=x1;
    u=v;
    x1=x;
    v=feval(f,x1);
    err=abs(x1-x0);
    iter=iter+1;
fprintf('%2.0f  %12.6f  %12.6f %12.6f\n', iter,x1,v,err)
%you can modigy fprintf and diplay more decimal points.
end
if((v-u)==0)
    disp(' division by zero')
end
if (iter>n)
    disp(' Method failed to converge')
end
end
```