
```
%Kyle O'Connor
%
%Lab 7
%
%2/24/2016
%

home;
clear all;
clc;

num = input('What number would you like to find the 5th root of? ');
x(1) = input('What is your initial guess? ');
func(1) = abs(x^5 - 80.5);
deriv(1) = abs(5*x^4);
deriv(2) = abs(20*x^3);
deriv(3) = abs(60*x^2);
deriv(4) = abs(120*x);
deriv(5) = abs(120);
deriv(6:101) = 0.01;
actual = (num)^(1/5);
counter = 0;
accuracy = 1;
o = 1;

while(accuracy > 0.0001) | (counter < 100)
    x = guess - func(o)/deriv(o);
    func(o+1) = abs(x(o+1)^5 - 80.5);
    accuracy = actual - x;
    o = o + 1;
    counter = counter + 1;
end

fprintf('Number of iterations: %i \n', counter);
fprintf('Final Estimate: %0.5f \n', x);

Error using input
Cannot call INPUT from EVALC.

Error in lab7 (line 13)
num = input('What number would you like to find the 5th root of? ');
```

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