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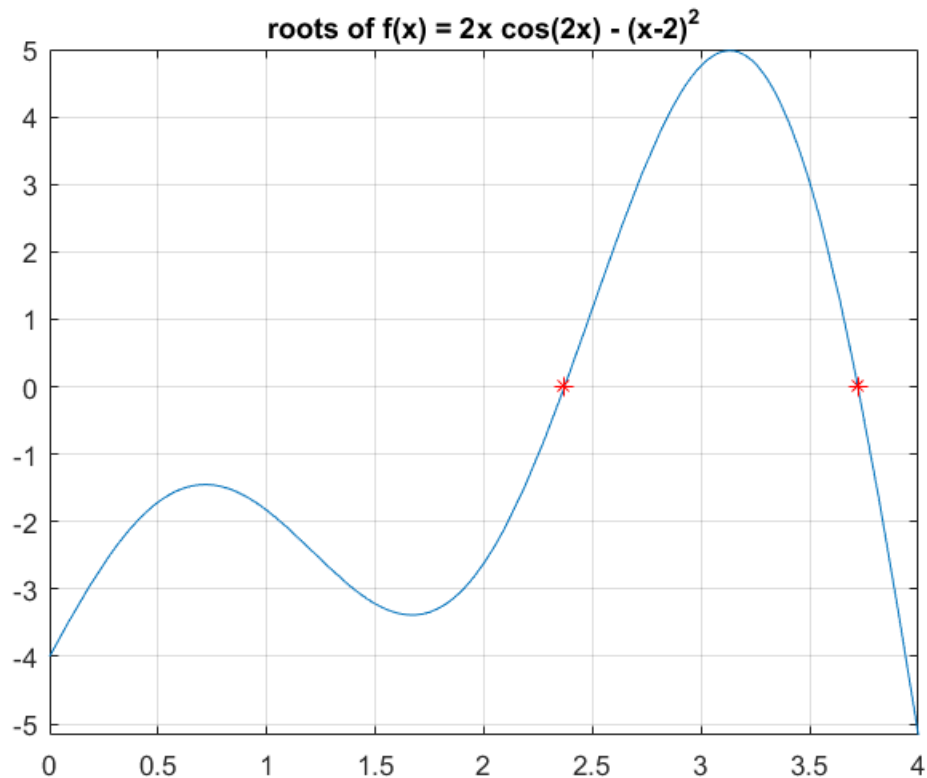
## HW2\_2b: Finding multiple roots

```
clear;clc;close all

f = @(x)2*x.*cos(2*x)-(x-2).^2; %the function handle
fplot(f,[0 4]) %plot to find the roots
grid on
% the for loop implements bisection method twice
% to find out two roots involved in this problem
es=0.5*10^(2-4); %4 sig figs
r1= bisection(f, [2 2.5 ], es);
r2= bisection(f, [3.5 4 ], es);
r=[r1 r2];
hold on
plot(r,0,'r*') %add to graph
title('roots of f(x) = 2x cos(2x) - (x-2)^2')

fprintf('\nThe roots are %3.3f & %3.3f\n',r(1),r(2))
```

The roots are 2.371 & 3.722



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