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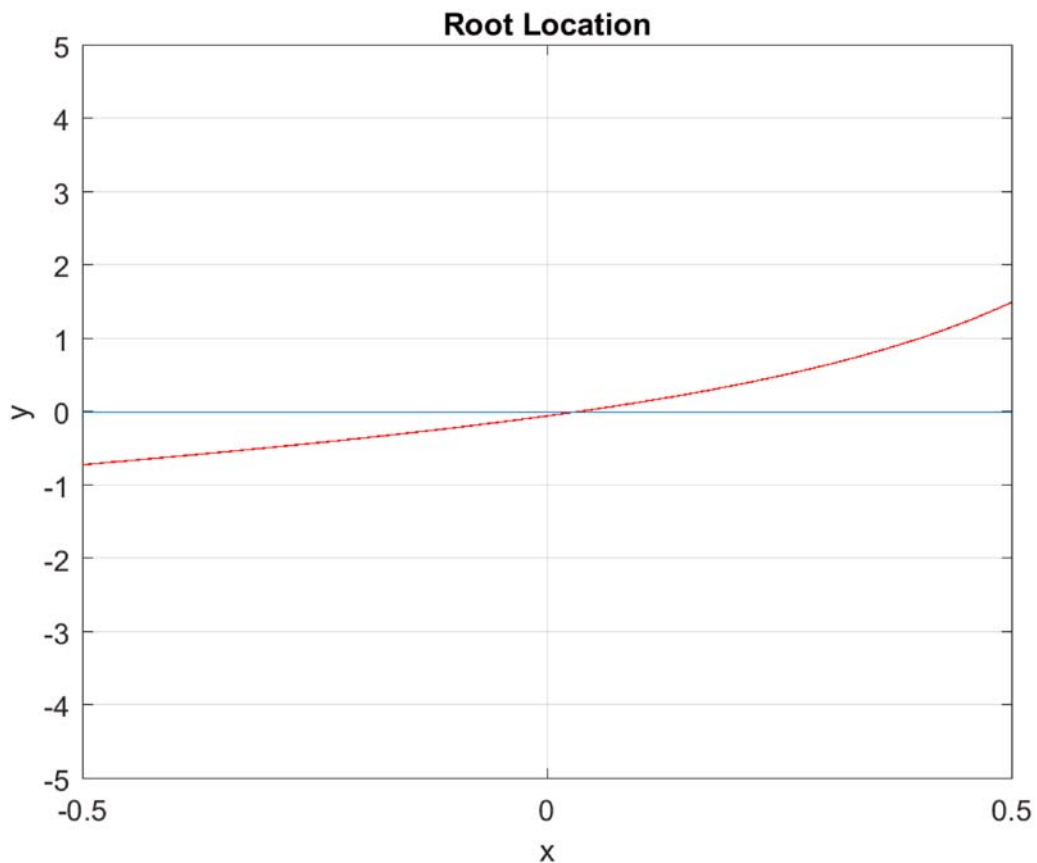
MECH 105

Homework 10

9/27/2017

<u>Purpose:</u> This code determines the mole fraction of x of H2O that dissociates at high tempetures.

```
clc
clear
close all
% Total pressure of the mixture in atm.
pt=3;
% Reactions equilibrium constant.
k=0.05;
func=@(x) ((x./(1-x)).*sqrt((2*pt)./(2+x)))-k;
fplot(func,'r');
xlim([-0.5 0.5]);
ylim([-5 5]);
refline(0,0);
grid on
title('Root Location')
xlabel('x')
ylabel('y')
```

```matlab
% Mole fraction
mf=fzero(func,0.1)
```

```
mf =
    0.028249441148471
```