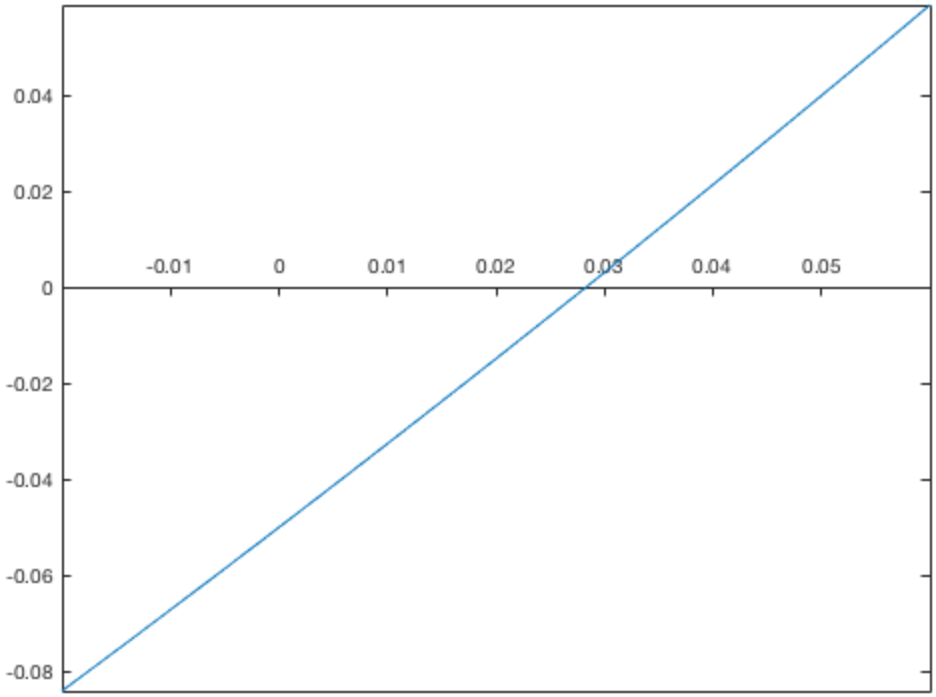
Homework 10

```
%Sarah Verderame
%Determine the value of x that satifies the equation.
%In other words, find the roots of the given function.
%I will do this by initializing the function then calling for the
%falseposition function to find the roots.

%Initialize variables
k = 0.05;
pt = 3; %atm

f = @(x)x/(1-x)*sqrt(2*pt/(2+x))-k; %function in terms of x

figure;
fplot(f,[-0.02,0.06]); %plot the function to guess the root bracket
ax = gca;
ax.XAxisLocation  = 'origin'; %move the x-axis to y=0

falseposition(f,0.01,0.5) %use the falseposition function to estimate
 the root of the function

Warning: Function behaves unexpectedly on array inputs. To improve
 performance,
properly vectorize your function to return an output with the same
 size and
shape as the input arguments.
The number of iterations used was: 17
The root approximation is: 0.028249

ans =

   0.028249430167672
```



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