Homework #2

a) Plot the function $f(x) = 3\pi^4 x^2 + \ln((x - \pi)^2)$ in the range 0 to 4.

b) Proof that $f(x)$ has two roots, $f(x) = 0$.

c) Estimate the location of the two roots.

d) Plot the function in the vicinity of these roots. Does the function change sign, as it must?