Math 605-01 (172) Homework #3

1) Use perturbation theory to find approximate solutions for the roots of

$$x^3 - x^2 - (1+\epsilon)x + 1 = 0$$

where $0 < \epsilon << 1$, and write a code to implement the method.

1) Use perturbation theory to find approximate solutions for the roots of

$$\epsilon x^2 + x - 1 = 0$$

where $0 < \epsilon << 1$, and write a code to implement the method.