Turn in starred problems Thursday 4/20/2017. **Note change to Thursday from our usual Tuesday due date.**

Exercises from the posted notes by David Gilliam, pages 28–29: 1*, 3*, 6*, 7*, 8*

9.A* Find the first two terms in the expansion of each of the roots of

$$2\varepsilon x^4 + x^3 - \varepsilon x^2 + 3\varepsilon^4 = 0.$$

Comments:

Gilliam Exercise 7: The idea is to formulate the problem so that the Lagrange Inversion Formula can be used. ϵ is already a small parameter; you should be able to write $x = x_0 + z$ for appropriate x_0, with z a small parameter, and then write $\epsilon = \dfrac{z}{f(z)}$. Don't worry about drawing the requested graph, unless to help yourself in seeing what is going on.

Gilliam Exercise 8: Follow the pattern used in Gilliam, Example 5.9 (and in class April 13).