

Worksheet #7: Dominant balancing

- (1) Find the scaling of x with ϵ that makes two terms of equal order and others of lower order, in:

$$\epsilon x^4 + \epsilon x^3 - x^2 + 2x - 1 = 0$$

- (2) Find the leading order term in each of the four roots.

- (3) If you have time, find the higher order correction terms for each of the roots.