Newton's Method

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- Use your program to approximate all solutions to the equation

  $$\frac{1}{100}[x^4+(e-2-\sqrt{2})x^3+(2\sqrt{2}-\sqrt{2}e-3-2e)x^2+(2\sqrt{2}e+3\sqrt{2}-3e)x+3\sqrt{2}e] = 0.$$

  All approximations to the solution are [[1.50000000e+00 0.00000000e+00] [1.41399515e+00 8.60048524e-02] [1.41421356e+00 2.18416013e-04] [1.41421356e+00 1.22761290e-09]]

- Use your program to approximate two positive and two negative solutions to the equation,

  $$\tan(x) - x - 2 = 0.$$

  Two positive solutions are 1.27446291 and 4.36345128. I could not find any negative solutions.