Newton's Method

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April 2019

For the first problem: [[7.50555325e+01, 2.49444675e+01]

[5.63511813e+01, 1.87043512e+01]

[4.23282409e+01, 1.40229404e+01]

 $\begin{bmatrix} 3.18181160e{+}01, \ 1.05101249e{+}01 \\ [2.39449336e{+}01, \ 7.87318237e{+}00] \end{bmatrix}$

[1.80525456e+01, 5.89238797e+00]

[1.36498372e+01, 4.40270844e+00]

[1.03697843e+01, 3.28005288e+00]

[7.93885606e+00, 2.43092824e+00]

 $[6.15424359\mathrm{e}{+00},\, 1.78461247\mathrm{e}{+00}]$

[4.86712271e+00, 1.28712088e+00]

 $[3.97082038\mathrm{e}{+00},\,8.96302331\mathrm{e}{-01}]$

[3.39309996e+00, 5.77720416e-01]

[3.08810476e+00, 3.04995201e-01]

[3.00038134e+00, 8.77234230e-02]

[2.99996104e+00, 4.20293866e-04]

[3.00000400e+00, 4.29576967e-05]]

For the second problem: two positive solutions

 $[397.5093084,\ 297.5093084$ $[401.45618742,\ 3.94687901]]$ two negative solutions I am not sure how to find the negative solutions