**BHAVESH SHRIMALI**

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| **Table of Iterations: Problem #2** | | | |
| **Iteration count** | **dstepi(cm)** | **||Rstepi||(N)** | **ΔR** |
| 0 | 6.67x10-3 | 2x104 |  |
| 1 | 1.333x10-2 | 6600 | 6597 |
| 2 | 1.553x10-2 | 4356 | 4353 |
| 3 | 1.6985x10-2 | 2874.96 | 2871.96 |
| 4 | 1.7944x10-2 | 1897.13 | 1894.13 |
| 5 | 1.857637x10-2 | 1252.1026 | 1249.103 |
| 6 | 1.89937x10-2 | 826.426 | 823.426 |
| 7 | 1.9269x10-2 | 545.62 | 542.62 |

**Solution3:**

**Modified Newton-Method**

|  |  |  |  |
| --- | --- | --- | --- |
| **Iteration count** | **dstepi(cm)** | **||Rstepi||(N)** | **Δ R (N)** |
| 1 | 0.013333333 | 6600 |  |
| 2 | 0.015533333 | 4356 | -2244 |
| 3 | 0.016985333 | 2874.96 | -1481.04 |
| 4 | 0.017943653 | 1897.4736 | -977.4864 |
| 5 | 0.018576145 | 1252.332576 | -645.141024 |
| 6 | 0.018993589 | 826.5395002 | -425.7930758 |
| 7 | 0.019269102 | 545.5160701 | -281.0234301 |
| 8 | 0.019450941 | 360.0406063 | -185.4754638 |
| 9 | 0.019570954 | 237.6268001 | -122.4138061 |
| 10 | 0.019650163 | 156.8336881 | -80.79311205 |
| 11 | 0.019702441 | 103.5102341 | -53.32345395 |
| 12 | 0.019736944 | 68.31675453 | -35.19347961 |
| 13 | 0.019759717 | 45.08905799 | -23.22769654 |
| 14 | 0.019774746 | 29.75877827 | -15.33027972 |
| 15 | 0.019784666 | 19.64079366 | -10.11798461 |
| 16 | 0.019791213 | 12.96292382 | -6.677869845 |
| 17 | 0.019795534 | 8.555529719 | -4.407394098 |
| 18 | 0.019798386 | 5.646649614 | -2.908880104 |
| 19 | 0.019800268 | 3.726788745 | -1.919860869 |
| 20 | 0.01980151 | 2.459680572 | -1.267108173 |
| 21 | 0.01980233 | 1.623389178 | -0.836291394 |
| 22 | 0.019802871 | 1.071436857 | -0.55195232 |
| 23 | 0.019803228 | 0.707148326 | -0.364288531 |
| 24 | 0.019803464 | 0.466717895 | -0.240430431 |
| 25 | 0.01980362 | 0.308033811 | -0.158684084 |
| 26 | 0.019803722 | 0.203302315 | -0.104731496 |
| 27 | 0.01980379 | 0.134179528 | -0.069122787 |
| 28 | 0.019803835 | 0.088558488 | -0.04562104 |
| 29 | 0.019803864 | 0.058448602 | -0.030109886 |
| 30 | 0.019803884 | 0.038576078 | -0.019872525 |
| 31 | 0.019803897 | 0.025460211 | -0.013115866 |
| 32 | 0.019803905 | 0.016803739 | -0.008656472 |
| 33 | 0.019803911 | 0.011090468 | -0.005713271 |
| 34 | 0.019803914 | 0.007319709 | -0.003770759 |
| 35 | 0.019803917 | 0.004831008 | -0.002488701 |
| 36 | 0.019803918 | 0.003188465 | -0.001642543 |
| 37 | 0.01980392 | 0.002104387 | -0.001084078 |
| 38 | 0.01980392 | 0.001388895 | -0.000715492 |
| 39 | 0.019803921 | 0.000916671 | -0.000472224 |
| 40 | 0.019803921 | 0.000605003 | -0.000311668 |
| 41 | 0.019803921 | 0.000399302 | -0.000205701 |
| 42 | 0.019803921 | 0.000263539 | -0.000135763 |
| 43 | 0.019803921 | 0.000173936 | -8.96033E-05 |
| 44 | 0.019803921 | 0.000114798 | -5.91382E-05 |
| 45 | 0.019803921 | 7.58E-05 | -3.90312E-05 |
| 46 | 0.019803922 | 5.00E-05 | -2.57606E-05 |
| 47 | 0.019803922 | 3.30E-05 | -1.7002E-05 |
| 48 | 0.019803922 | 2.18E-05 | -1.12213E-05 |
| 49 | 0.019803922 | 1.44E-05 | -7.40607E-06 |
| 50 | 0.019803922 | 9.49E-06 | -4.888E-06 |
| 51 | 0.019803922 | 6.26E-06 | -3.22609E-06 |
| 52 | 0.019803922 | 4.13E-06 | -2.12922E-06 |
| 53 | 0.019803922 | 2.73E-06 | -1.40528E-06 |
| 54 | 0.019803922 | 1.80E-06 | -9.27488E-07 |
| 55 | 0.019803922 | 1.19E-06 | -6.12148E-07 |
| 56 | 0.019803922 | 7.84E-07 | -4.04005E-07 |
| 57 | 0.019803922 | 5.18E-07 | -2.66649E-07 |
| 58 | 0.019803922 | 3.42E-07 | -1.75991E-07 |
| 59 | 0.019803922 | 2.25E-07 | -1.16146E-07 |
| 60 | 0.019803922 | 1.49E-07 | -7.66668E-08 |
| 61 | 0.019803922 | 9.82E-08 | -5.05897E-08 |
| 62 | 0.019803922 | 6.48E-08 | -3.33894E-08 |
| 63 | 0.019803922 | 4.28E-08 | -2.20462E-08 |
| 64 | 0.019803922 | 2.82E-08 | -1.45446E-08 |
| 65 | 0.019803922 | 1.86E-08 | -9.60426E-09 |
| 66 | 0.019803922 | 1.23E-08 | -6.33736E-09 |
| 67 | 0.019803922 | 8.12E-09 | -4.1764E-09 |
| 68 | 0.019803922 | 5.36E-09 | -2.75759E-09 |