|  |  |  |
| --- | --- | --- |
|  | False Position |  |
| * Problem Statement | For the following function : | |
| * Requirements | Use the False position method in interval [-1.0, 0.0] to find the root of the equation for 150 iterations or until the approximate error < undetermined | |
| * Solution: The formula of the false-position method is:   For the first iteration the initial guesses interval -1.0, 0.0    ---  The 1st iteration doesn’t have either nor , as there isn’t a previous approximation.  -1.0 -3.97600  -0.032600.04440  Since -0.17654 then xu -0.03260.  For the second iteration the initial guesses interval -1.0, -0.03260    24.68196  -1.0 -3.97600  -0.043290.01653  Since -0.17654 then xu -0.04329.  For the third iteration the initial guesses interval -1.0, -0.04329      8.38414  -1.0 -3.97600  -0.047250.00637  Since -0.17654 then xu -0.04725.  Then, the root of the function after achieving the required conditions is :  -0.04975  And so on for the rest iterations until reaching a termination condition, as the following table: | | |
|  | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| iteration | x lower | x upper | x root | f(xl) | f(xu) | f(xr) | Et(%) | Ea(%) |
| 0 | -1.0 | 0.0 | -0.0326034063260341 | -3.97600000000000 | 0.134000000000000 | 0.0444026245678327 | --- | --- |
| 1 | -1.0 | -0.0326034063260341 | -0.04328764662938495 | -3.97600000000000 | 0.0444026245678327 | 0.0165317574567774 | --- | 24.6819615647530 |
| 2 | -1.0 | -0.04328764662938495 | -0.04724907700555822 | -3.97600000000000 | 0.0165317574567774 | 0.00637169121350620 | --- | 8.38414341026653 |
| 3 | -1.0 | -0.04724907700555822 | -0.048773453722602875 | -3.97600000000000 | 0.00637169121350620 | 0.00248643344734686 | --- | 3.1254229518263914 |
| 4 | -1.0 | -0.048773453722602875 | -0.04936794148578445 | -3.97600000000000 | 0.00248643344734686 | 0.000974867452421480 | --- | 1.204197998315894 |
| 5 | -1.0 | -0.04936794148578445 | -0.0496009679151588 | -3.97600000000000 | 0.000974867452421480 | 0.000382920441380330 | --- | 0.4698021816286563 |
| 6 | -1.0 | -0.0496009679151588 | -0.04969249009099919 | -3.97600000000000 | 0.000382920441380330 | 0.000150515859403039 | --- | 0.18417707720582085 |
| 7 | -1.0 | -0.04969249009099919 | -0.049728463666692715 | -3.97600000000000 | 0.000150515859403039 | 5.91804037934074e-5 | --- | 0.07234001020951863 |
| 8 | -1.0 | -0.049728463666692715 | -0.04974260768484787 | -3.97600000000000 | 5.91804037934074e-5 | 2.32713460717460e-5 | --- | 0.0284344122945128 |
| 9 | -1.0 | -0.04974260768484787 | -0.04974816946533169 | -3.97600000000000 | 2.32713460717460e-5 | 9.15132383483286e-6 | --- | 0.011179869618520183 |
| 10 | -1.0 | -0.04974816946533169 | -0.049750356598684486 | -3.97600000000000 | 9.15132383483286e-6 | 3.59876717456742e-6 | --- | 0.0043962164340599595 |
| 11 | -1.0 | -0.049750356598684486 | -0.04975121669026624 | -3.97600000000000 | 3.59876717456742e-6 | 1.41522825292117e-6 | --- | 0.0017287850206941884 |
| 12 | -1.0 | -0.04975121669026624 | -0.04975155492428203 | -3.97600000000000 | 1.41522825292117e-6 | 5.56545114882567e-7 | --- | 0.0006798461199919975 |
| 13 | -1.0 | -0.04975155492428203 | -0.04975168793636855 | -3.97600000000000 | 5.56545114882567e-7 | 2.18864190604240e-7 | --- | 0.0002673519071127575 |
| 14 | -1.0 | -0.04975168793636855 | -0.04975174024404366 | -3.97600000000000 | 2.18864190604240e-7 | 8.60694887305780e-8 | --- | 0.00010513737782509015 |
| 15 | -1.0 | -0.04975174024404366 | -0.04975176081431029 | -3.97600000000000 | 8.60694887305780e-8 | 3.38472824490399e-8 | --- | 4.134580624334803e-05 |
| 16 | -1.0 | -0.04975176081431029 | -0.04975176890367656 | -3.97600000000000 | 3.38472824490399e-8 | 1.33106239919023e-8 | --- | 1.6259454578948368e-05 |
| 17 | -1.0 | -0.04975176890367656 | -0.049751772084862894 | -3.97600000000000 | 1.33106239919023e-8 | 5.23447385436526e-9 | --- | 6.394116635206554e-06 |
| 18 | -1.0 | -0.049751772084862894 | -0.04975177333588138 | -3.97600000000000 | 5.23447385436526e-9 | 2.05848477152770e-9 | --- | 2.514520386649479e-06 |
| 19 | -1.0 | -0.04975177333588138 | -0.04975177382785107 | -3.97600000000000 | 2.05848477152770e-9 | 8.09510153354509e-10 | --- | 9.888485501078922e-07 |
| 20 | -1.0 | -0.04975177382785107 | -0.049751774021320784 | -3.97600000000000 | 8.09510153354509e-10 | 3.18344156591266e-10 | --- | 3.888699775607891e-07 |
| 21 | -1.0 | -0.049751774021320784 | -0.04975177409740377 | -3.97600000000000 | 3.18344156591266e-10 | 1.25190552369148e-10 | --- | 1.5292517405255008e-07 |
| 22 | -1.0 | -0.04975177409740377 | -0.04975177412732382 | -3.97600000000000 | 1.25190552369148e-10 | 4.92318685818560e-11 | --- | 6.013865059602816e-08 |
| 23 | -1.0 | -0.04975177412732382 | -0.04975177413909004 | -3.97600000000000 | 4.92318685818560e-11 | 1.93606797260770e-11 | --- | 2.364984997301959e-08 |
| 24 | -1.0 | -0.04975177413909004 | -0.04975177414371716 | -3.97600000000000 | 1.93606797260770e-11 | 7.61368745827440e-12 | --- | 9.30042224950871e-09 |
| 25 | -1.0 | -0.04975177414371716 | -0.0497517741455368 | -3.97600000000000 | 7.61368745827440e-12 | 2.99413271953597e-12 | --- | 3.6574407462332924e-09 |
| 26 | -1.0 | -0.0497517741455368 | -0.04975177414625239 | -3.97600000000000 | 2.99413271953597e-12 | 1.17744702876621e-12 | --- | 1.4383151634445647e-09 |
| 27 | -1.0 | -0.04975177414625239 | -0.0497517741465338 | -3.97600000000000 | 1.17744702876621e-12 | 4.63046267995537e-13 | --- | 5.656217232457494e-10 |
| 28 | -1.0 | -0.0497517741465338 | -0.049751774146644466 | -3.97600000000000 | 4.63046267995537e-13 | 1.82104331614141e-13 | --- | 2.2244115063559091e-10 |
| 29 | -1.0 | -0.049751774146644466 | -0.04975177414668799 | -3.97600000000000 | 1.82104331614141e-13 | 7.15816295127070e-14 | --- | 8.747576003418432e-11 |
| 30 | -1.0 | -0.04975177414668799 | -0.04975177414670509 | -3.97600000000000 | 7.15816295127070e-14 | 2.81719092498633e-14 | --- | 3.437942418434155e-11 |
| 31 | -1.0 | -0.04975177414670509 | -0.04975177414671182 | -3.97600000000000 | 2.81719092498633e-14 | 1.10744746706359e-14 | --- | 1.352861722466807e-11 |
| 32 | -1.0 | -0.04975177414671182 | -0.049751774146714466 | -3.97600000000000 | 1.10744746706359e-14 | 4.38538094726937e-15 | --- | 5.313817693400269e-12 |
| 33 | -1.0 | -0.049751774146714466 | -0.04975177414671551 | -3.97600000000000 | 4.38538094726937e-15 | 1.72084568816899e-15 | --- | 2.106001238066729e-12 |
| 34 | -1.0 | -0.04975177414671551 | -0.04975177414671592 | -3.97600000000000 | 1.72084568816899e-15 | 6.93889390390723e-16 | --- | 8.228746559333508e-13 |
| 35 | -1.0 | -0.04975177414671592 | -0.04975177414671609 | -3.97600000000000 | 6.93889390390723e-16 | 2.77555756156289e-16 | --- | 3.34728673600006e-13 |
| 36 | -1.0 | -0.04975177414671609 | -0.04975177414671616 | -3.97600000000000 | 2.77555756156289e-16 | 1.11022302462516e-16 | --- | 1.3947028066666899e-13 |
| 37 | -1.0 | -0.04975177414671616 | -0.049751774146716186 | -3.97600000000000 | 1.11022302462516e-16 | 2.77555756156289e-17 | --- | 5.5788112266667563e-14 |
| 38 | -1.0 | -0.049751774146716186 | -0.04975177414671619 | -3.97600000000000 | 2.77555756156289e-17 | 0 | --- | 1.394702806666689e-14 |
| 39 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 40 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 41 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 42 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 43 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 44 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 45 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 46 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 47 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 48 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 49 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 50 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 51 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 52 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 53 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 54 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 55 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 56 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 57 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 58 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 59 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 60 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 61 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 62 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 63 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 64 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 65 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 66 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 67 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 68 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 69 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 70 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 71 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 72 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 73 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 74 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 75 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 76 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 77 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 78 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 79 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 80 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 81 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 82 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 83 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 84 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 85 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 86 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 87 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 88 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 89 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 90 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 91 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 92 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 93 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 94 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 95 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 96 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 97 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 98 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 99 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 100 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 101 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 102 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 103 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 104 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 105 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 106 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 107 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 108 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 109 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 110 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 111 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 112 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 113 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 114 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 115 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 116 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 117 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 118 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 119 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 120 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 121 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 122 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 123 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 124 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 125 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 126 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 127 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 128 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 129 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 130 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 131 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 132 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 133 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 134 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 135 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 136 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 137 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 138 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 139 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 140 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 141 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 142 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 143 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 144 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 145 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 146 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 147 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 148 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 149 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |
| 150 | -1.0 | -0.04975177414671619 | -0.04975177414671619 | -3.97600000000000 | 0 | 0 | --- | 0.0 |

