**Numerical Analysis Assignment #1**

2020/09/07

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1. Fill the following table to find a root of by Bisection method.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| iteration |  |  |  |  |  |  |
| 0 | 1 | 2 | 1.500000 | -2.000000 | 1.000000 | -0.750000 |
| 1 | 1.500000 | 2.000000 | 1.750000 | -0.750000 | 1.000000 | 0.062500 |
| 2 | 1.500000 | 1.750000 | 1.625000 | -0.750000 | 0.062500 | -0.359375 |
| 3 | 1.625000 | 1.750000 | 1.687500 | -0.359375 | 0.062500 | -0.152344 |
| 4 | 1.687500 | 1.750000 | 1.718750 | 0.152344 | 0.062500 | 0.045898 |
| 5 | 1.718750 | 1.750000 | 1.734375 | 0.045898 | 0.062500 | 0.008057 |

2. Fill the following table to find a root of by Bisection method.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| iteration |  |  |  |  |  |  |
| 0 | 3 | 4 | 3.500000 | 0.037270 | -0.040765 | -0.025413 |
| 1 | 3.500000 | 4.000000 | 3.750000 | -0.025413 | -0.040765 | -0.037225 |
| 2 | 3.750000 | 4.000000 | 3.875000 | -0.037225 | -0.040765 | -0.039832 |
| 3 | 3.875000 | 4.000000 | 3.937500 | 0.039832 | 0.040765 | 0.040485 |
| 4 | 3.937500 | 4.000000 | 3.968750 | 0.040485 | 0.040765 | 0.040669 |
| 5 | 3.968750 | 4.000000 | 3.984375 | 0.040669 | 0.040765 | 0.040728 |