

Console

n	x	f(x)
1	2.0000000000	2.3452078799
2	2.3452078799	2.2653933794
3	2.2653933794	2.2819119596
4	2.2819119596	2.2784084376
5	2.2784084376	2.2791477234
6	2.2791477234	2.2789915559
7	2.2789915559	2.2790245373
8	2.2790245373	2.2790175715

The solution of this equation after 8 iterations is 2.2790175715