input: 0.3

outputs: 0.42

0.4872

0.49967231999999995

0.4999997852516352

0.4999999999999078

0.49999999999999994

0.49999999999999994

0.49999999999999994

0.49999999999999994

0.49999999999999994

input: 0.5

outputs:0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

0.5

input: 0.1

outputs: 0.18000000000000002

0.2952

0.41611392

0.4859262511644672

0.49960385918742867

0.49999968614491325

0.49999999999980305

0.5

0.5

0.5

There is a pretty big difference between the two programs. The first one is truly chaotic, no matter what input you give it, and the second one always ends up at 0.5. It evidently depends on the first number in the equation, which is 3.9 in the first one and 2.0 in the second one.