Homework #2

```
#1
X =
0.0933
0.3841
-1.2857
0.058
0.0493
0.0382
0.2905
-0.4883
0.5828
Mean = -0.0309
#2
LU
>> [L, U] = LUcalculator(A, dim1, dim2)
L =
    1.0000
                  0
                            0
                                      0
                                               0
                                                         0
                                                                  0
                                                                            0
                                                                                     0
    0.8095
            1.0000
                                                                                     0
    1.9524
            1.6514
                      1.0000
                                 1.0000
    0.5714
            0.3048
                       0.2247
                                               0
                                                         0
                                                                  0
                                                                            0
                                                                                     0
    0.6667
            0.5996
                       0.4910
                                 1.0246
                                                         0
                                                                  0
                                                                            0
                                                                                     0
                                          1.0000
    0.0952
           -0.2072
                      -0.3371
                                 0.0046
                                        -1.1718
                                                                  0
                                                                            0
                                                                                     0
                                                    1.0000
            0.4084
    0.5238
                      -0.3430
                               -1.6101
                                         -2.9945
                                                    1.6818
                                                             1.0000
                                                                            0
                                                                                     0
    1.0952
             1.4243
                     0.6327
                                 2.2333
                                         -1.4168
                                                   -1.2830
                                                             -0.7508
                                                                       1.0000
                       0.3145
    1.4762
              1.7669
                               -1.7193
                                         -3.5746
                                                    1.6217
                                                             1.8093
                                                                       0.3741
                                                                                 1.0000
U =
   21.0000
             32.0000
                      14.0000
                                 8.0000
                                          6.0000
                                                    9.0000
                                                            11.0000
                                                                       3.0000
                                                                                 5.0000
         0
           -23.9048
                      -3.3333
                                 7.5238
                                         50.1429
                                                  15.7143
                                                            10.0952
                                                                    -1.4286
                                                                                1.9524
         0
                      -8.8287 -23.0438 -83.5199 -21.5219 -12.1474
                                                                       3.5020
                                                                                -3.9861
                  0
         0
                  0
                            0
                                 6.3141
                                          3.0582
                                                    9.9043
                                                             0.3673
                                                                      22.9341
                                                                               16.4436
         0
                  0
                            0
                                         14.8070
                                                    7.9966
                                                             0.2013 -19.3608
                                     0
                                                                              -10.3948
                  0
                            0
                                 0.0000
                                               0
                                                   17.4688
                                                            20.1832 -11.1936
         0
                                                                                 3.3285
                                -0.0000
                                               0
                                                         0 -20.8012
                                                                     10.9883
                                                                                1.9667
   -0.0000
                  0
                            0
                                 0.0000
                                               0
                                                         0
                                                             0.0000 -84.2266 -35.4390
```

0.0000

0

-0.0000

0

-3.1609

Y:

0.0000

- 2.0000
- 3.3810
- -2.4880
- -0.6142
- 4.4903
- 13.9359
- -10.2622
- 20.4759
- -1.8421

X:

- 0.0933
- 0.3841
- -1.2857
- 0.0580
- 0.0493
- 0.0382
- 0.2905
- -0.4883
- 0.5828

#3

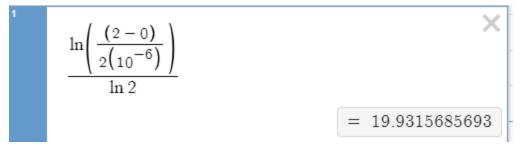
Actual values:

- 0.0933
- 0.3841
- -1.2857
- 0.058
- 0.0493
- 0.0382
- 0.2905
- -0.4883
- 0.5828

Margin of error = 0 for all x, all values are the same.

Problem 2

#1



= 20 minimum iterations.

#2

Initial guess: 1(2-0)/2 = 1

result =

1.0000 1.5000 1.2500 1.3750 1.4375 1.4062 1.3906 1.3984 1.3945 1.3965 1.3955 1.3955 1.3950 1.3951 1.3951 1.3951 1.3951 1.3951 1.3951 1.3951 1.3951 1.3951 1.3951 1.3951

#3

