

# Homework Suggestions - Do's and Dont's

MAT 128A

Updated: October 21, 2019

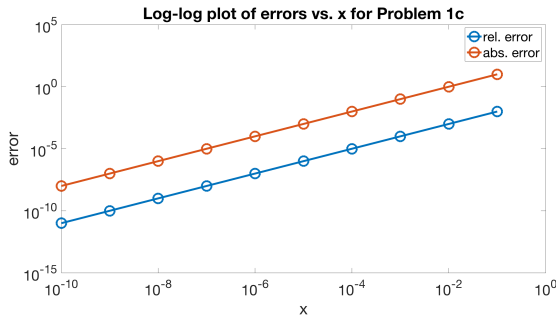
**Do:** Provide tables with headers in your write-ups, e.g.:

x	f(x)
1.0000000000000000e-01	4.995834721974289e-01
1.0000000000000000e-02	4.999958333473664e-01
1.0000000000000000e-03	4.999999583255033e-01
1.0000000000000000e-04	4.999999969612645e-01
1.0000000000000000e-05	5.000000413701854e-01
1.0000000000000000e-06	5.000444502911705e-01
1.0000000000000000e-07	4.996003610813205e-01
1.0000000000000000e-08	0
1.0000000000000000e-09	0
1.0000000000000000e-10	0

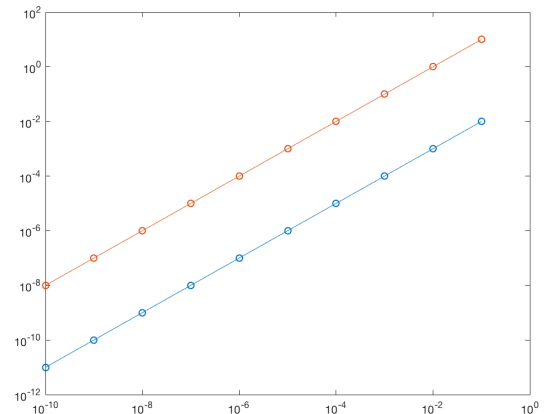
**Don't:** Just copy-paste or screenshot from MATLAB, e.g.:

```
>> f(x)
ans =
Columns 1 through 3
    4.995834721974289e-01    4.999958333473664e-01
Columns 4 through 6
    4.999999969612645e-01    5.000000413701856e-01
Columns 7 through 9
    4.996003610813205e-01    0
Column 10
    0
```

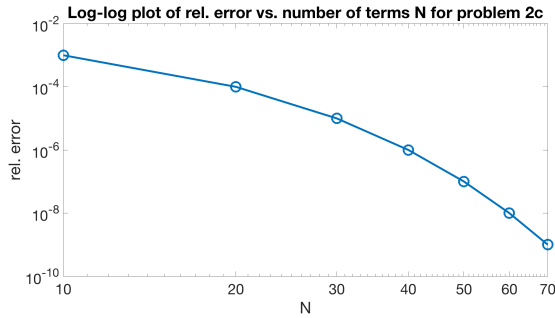
**Do:** Label plots clearly with x-labels, y-labels, legends, and titles, e.g.:



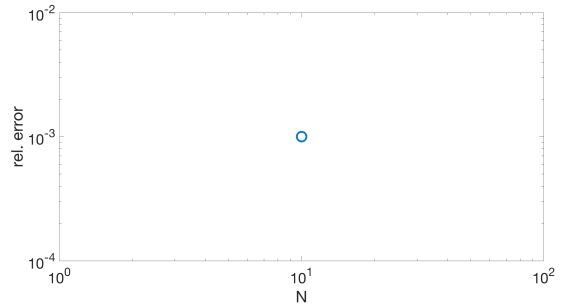
**Don't:** Plot without any labels, e.g.:



**Do:** Adapt your discretization, number  $N$  of Taylor series terms, etc., to illustrate the rate of convergence, e.g.:



**Don't:** Undersample and then have empty plots, shrug at convergence rate questions, etc., e.g.:



**Do:** Sample data *sufficiently* but not *excessively* for tables, plots, etc.

**Don't:** Oversample - report more output than would fit in a one-page table. Undersample - like the plot above.

**Do:** Answer questions with typed or hand-written mathematical analysis UNLESS the question asks you to provide computer output, tables, programs, or plots.

**Don't:** Answer questions in code comments, use MATLAB to do symbolic math, etc..

**Do:** Answer all parts of the question - e.g., plot errors AND discuss the rates of convergence shown in your plots.

**Don't:** Forget to answer part of a long question.

**Do:** Start homework early! Come to office hours and ask us lots of questions, we are happy to help!

**Don't:** Procrastinate or ask long open-ended questions by e-mail the day the assignment is due.