

SM 233. Intro to applied math. Homework 1

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Due : Thursday 1/19/2012 at 2359

Instructions

Do the following problems and submit your code and answers. Code files should be named as follows:

`lastname.firstname.alfa.filename.extension`

all lowercase.

So MIDN John Q Smith for problem 1 on this homework would submit a file named `smith.john.123456.ngon.m`

I will only accept files with a `.m` or a `.txt` extension. You should put explanations in text files and matlab code in `m` files.

I will look at, and run your code. You will be assigned a score from 0 — 4 on each problem.

The problems are listed below. For each problem there is a list of files that you need to submit. The filename is given and is to be as used in the above format.

Code is hard to write, difficult to debug and unforgiving. Start early on this assignment and get your doubts cleared in time.

No late submission. **No excuses**, follow the instructions precisely. Please ask me if you have any questions. **Do not leave this to the last minute.**

Problems

- Book 1.7
 - instructions : Submit a script.
 - filename : 1.7

- Book 1.11
 - **instructions** Submit a script. Also submit a text file with your explanation.
 - **filenames** `1.11.m` (script), `1.11.txt` (explanation)
- Book 1.13
 - instructions : Submit a script.
 - filename : `1.13.m`
- Book 1.14
 - instructions : Submit a script.
 - filename : `1.14.m`
- Book 1.16
 - instructions : Submit a script.
 - filename : `1.16.m`
- Book 1.21
 - instructions : Submit a script.
 - filename : `1.21.m`
- Book 1.26
 - instructions : Submit a script.
 - filename : `1.26.m`
- Circumscribed n -gon

In this problem you will need to write a two scripts.

The first of these will produce a plot of a regular n -gon that circumscribes a circle of given radius r and center (a, b) .

Your second script should accept prompt the user for a natural number n , the radius r and the center (a, b) . Then the script should produce a regular n -gon that circumscribes the given circle. The program should check that the input is sensible and should print out a useful error message if something is wrong.

 - **instructions** Submit two scripts
 - **filenames** `ngon.m` (first script) and `ngon_user.m` (second script)