PHYS 580 Homework 3 - due Mon Oct 14, 2019, in class

All questions are worth 10 points, irrespectively of complexity or length. Please submit all your solutions on paper, and make sure to include the same list of basic ingredients in all your solutions as in Homeworks 1 and 2 (for economy of space, the list is omitted here).

1) Problem 4.10 (p.113) in the Giordano-Nakanishi textbook. Only consider the correction coming from general relativity (ignore other Solar System planets).

2) Problem 4.14 (p.118). Also run your code for a hypothetical "Moon" that has **either** the same mass as Earth (e.g., binary planets), **or** a rather elliptical orbit.

3) Problem 5.7 (p.143.). Note that you can borrow most of the work from Lab 7, but now you have to also include the SOR algorithm in your comparisons.

4) Problem 5.8 (p.147).

5) Problem E.2 (p.510).

Note the errata pages for the textbook:

`http://www.physics.purdue.edu/~hisao/book/www/errata.pdf`
`http://www.physics.purdue.edu/~isao/book/www/errata.html`