Pre-class assignment #18

PHY-905-005
Computational Astrophysics and Astrostatistics
Spring 2023

This assignment is due the evening of Monday April 11, 2023. Turn in all materials via GitHub.

Reading:

1. Chapters 1 and 2 of *Monte Carlo Theory, Methods, and Examples* by Art Owen. Direct link to chapters. (Chapters included in this repository as PDF.)
2. The Wikipedia page on Monte Carlo Integration
3. The Wikipedia page on Pseudorandom number generators (which is what most computers use to generate "random" numbers). Python and most other programming languages use a generator known as the Mersenne Twister, which is good enough for most non-cryptographic applications.

Your assignment:

1. Work through the tasks in the included Jupyter notebook!
2. In the file `ANSWERS.md`, write down any questions that you have about the material you read or the work you did in the Jupyter notebook discussed above, any points that are not clear, or anything you'd like to know more about. Aim for at least 3 questions/unclear points/etc.

Handing it in: Include your modified code and your answers to the questions (in the file `ANSWERS.md`) in your assignment.