Problem Set #2

MACS 30150, Dr. Evans
Due Monday, Jan. 21 at 11:30am

Do the following Exercises from the Brigham Young University Applied Mathematics and Computational Emphasis (ACME) Python labs Humpherys and Jarvis (2017) and from Dr. Evans' numerical integration notebook.

1. **Numerical differentiation exercises (5 points).** Do problems 1 through 5 and 7 (skip 6) from ACME: Numerical Differentiation lab. You will need to download the plane.npy file, which is saved in the course repository.

2. **Numerical integration exercises from Evans: Numerical Integration lab (5 points).** Do exercises 2.1, 2.2, 2.3, 2.4, 3.1, 3.2, 4.1, 4.2, and 4.3 from the Numerical Integration Jupyter notebook used in class. [Note. This means to do all the exercises listed in the notebook.]

References

Humpherys, Jeffrey and Tyler Jarvis, "Computational Labs for Foundations of Applied Mathematics, Volumes I and II," 2017.