## Computation, Problem Set #1a, Numerical Differentiation, Integration, and Newton's Method

OSE Lab

Due Monday, July 8 at 11:00pm

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

1. **Exercises from ACME: Numerical Differentiation lab.** Do problems 1, 2, 3, 5, 6 from Numerical Differentiation lab.
2. **Exercises from ACME: Newton's Method lab.** Do problems 1, 3, 4, and 7 from Newton's Method lab.
3. **Exercises from Evans: Numerical Integration lab.** Do exercises 2.1, 2.2, 2.3, 2.4, 3.1, 3.2, and 4.1 from Evans' Numerical Integration lab.

# References

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