

# Homework 1

**Assigned:** January 18, 2019

**Due:** January 31, 2019 at 11:55pm

You are to put all programs in a zip file and submit on CAMU.

1. Modify the chaos.py program from Chapter 1 so that the number of values to print is determined by the user. File to submit: chaos.py. (2 pts)
2. Write a program that converts temperatures from Fahrenheit to Celsius. File to submit: converter.py. (2 pts)
3. Write a program to calculate the volume and surface area of a sphere from its radius, given as input. Here are some formulas that might be useful:  $V = \frac{4}{3}\pi r^3$ ,  $A = 4\pi r^2$ . File to submit: sphere.py. (3 pts)
4. Two points in a plane are specified using the coordinates (x1, y1) and (x2, y2). Write a program that calculates the slope of a line through two (non-vertical) points entered by the user.  $slope = (y2 - y1)/(x2 - x1)$ . File to submit: slope.py. (3 pts)