Usage instructions for IntersectingCircles:

On Windows:

1. Download and install the latest version of Python 3 from https://www.python.org
2. Execute IntersectingCircles.py by double clicking on the file
3. The program will prompt for several inputs:

(1) The Monte Carlo error tolerance, as a percentage of the estimated area. The Monte Carlo simulation portion of the program will stop sampling after 3 * standard deviation <= estimated area * percentage.

Example: Entering 0.1 will set the tolerance to 0.1% of the estimated area

Assuming the sampling means follow a normal distribution, the true population mean should be within 3 standard deviations of the sample mean.

(2) **n**, the step size for the scanline method. The step size will be 1 / (2 ^ n). The recommended value for n is 10 (it is unclear whether higher values of n would increase accuracy by much, but will significantly increase the running time of the program)

(3) The **complete path** to the data file (must be a .csv file), for example:
C:\Users\chris\Desktop\IntersectingCircles\0322_experiment_data.csv

(4) The **complete path** to the output file (the file does **not** have to already exist, the program will create it for you), for example:

C:\Users\chris\Desktop\IntersectingCircles\0322_results.txt
(We recommend that the output file be a .txt file)