

Assignment 1

General Instructions: Save all the files to a directory named "<group-number>_as1", e.g. 23_as1. Compress this directory to a zip file and submit it via Blackboard (on the same place where you have downloaded the assignment. Comment the code well in a clear manner and choose clear names for your variables and parameters. The assignment must be presented Tuesday, 17/11. The deadline for turning in the assignment is 16/11 at 23:59:59.

1 candies.py

Write a program where the user can input the price of a candy as well as how much money they have. The program must then calculate and print the number of candies that they can buy with that amount of money and the money they will have left after buying the candy.

2 hypotenuse.py

Write a program where the user can input the length of the two legs of a right triangle. The program must calculate the length of the hypotenuse and print it out. Remember that the formula for the hypotenuse is given by $hypotenuse = \sqrt{leg1^2 + leg2^2}$

3 circle_length.py

Write a program where the user can input the radius of circle. The program must calculate the length of the circle and print it out.

4 laps.py

Write a program where the user can input the radius of a circular running track and the distance they have ran on the track. The program must calculate the number of laps they have ran (this number can be a decimal, e.g. 2.4 laps) and print out the results.

5 circular_sector.py

Write a program where the user can input the radius and the angle of a circular sector. The program must calculate the area of the circular sector and print out the results. Tip: The area of a full circle is given by πr^2 .