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2 # Fall 2018
3 # Lab 1
4
5
6 import math # Need for pi
7
8 # Programming Exercise 2.1
9 def circle_circumference(radius):
10     circumference = 2 * math.pi * radius
11     return circumference
12
13 # Programming Exercise 2.2
14 def circle_area(radius):
15     area = math.pi * radius ** 2 # ** performs exponentiation
16     return area
17
18 # Programming Exercise 2.3
19 def sphere_volume(radius):
20     volume = 4.0 / 3.0 * math.pi * radius ** 3 # can use 4/3 in Python 3.x but not 2.x
21     return volume
22
23 # Test the functions
24
25 # Gather user's input
26 my_radius = float(input('Enter radius: '))
27 # OR
28 # print('Enter radius:')
29 # my_radius = float(input())
30
31 # Call the functions defined earlier
32 my_circumference = circle_circumference(my_radius)
33 my_area = circle_area(my_radius)
34 my_volume = sphere_volume(my_radius)
35
36 # Output the results
37 print('Circle Circumference:', my_circumference)
38 print('Circle Area:', my_area)
39 print('Sphere Volume:', my_volume)
40

```

Results

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Enter radius: 6
Circle Circumference: 37.69911184307752
Circle Area: 113.09733552923255
Sphere Volume: 904.7786842338603

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