1. **Problem statement:**

To ask user to put a number representing the radius (in meters) and then compute and display the volume of a sphere and its surface area

1. **Analysis:**

Inputs: a number in meters

Outputs: a number representing volume and a number representing the surface area

Additional requirements: none

1. **Design:**

Algorithm

-1. Declare three variables namely radius, volume and surface area

-2. Ask user for to input a number representing the radius

-3. Read the input real number and store the value of such a real number into radius

-4. Compute the volume according to the provided formula

-5. Compute the surface area according to the provided formula

-6. Display the volume and surface area at given radius

**4. Implementation**: see C code in file 1405347\_1-3.c with comments.

**5. Testing:**

The C program was tested by carrying out a set of experiments; and the C program was verified successfully. For instance,

Please enter the radius: 1

The volume of the sphere is: 4.188787

The surface area of the sphere is: 12.566360

Please enter the radius: 2

The volume of the sphere is: 33.510292

The surface area of the sphere is: 50.265442