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[NPTEL \(https://swayam.gov.in/explorer?ncCode=NPTEL\)](https://swayam.gov.in/explorer?ncCode=NPTEL) » **Programming in C++ (course)**
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W5_Programming-Qs1

Due on 2020-10-22, 23:59 IST

Consider the following program. Fill in the blank at **LINE-1** for appropriate inheritance. Fill in the blanks at **LINE-2** and **LINE-3** to complete the function definition such that it can satisfy the given test cases.

Private Test cases used for evaluation
Input Expected Output Actual Output Status

Test Case 1

| | | | |
|--------|-------------------|-------------------|--------|
| 1 0 | 4186.67, 12 56 | 4186.67, 12 56 | Passed |
|--------|-------------------|-------------------|--------|

The due date for submitting this assignment has passed.

1 out of 1 tests passed.

You scored 100.0/100.

Assignment submitted on 2020-10-22, 23:29 IST

Your last recorded submission was :

```

1 #include <iostream>
2 using namespace std;
3
4 #define PI 3.14
5
6 class Volume {
7 public:
8     double getValue(int r) { return (4 * PI * r * r * r / 3); }
9 };
10
11 class SurfaceArea {
12 public:
13     double getValue(int r) { return 4 * PI * r * r; }
14 };
15 class Sphere : public Volume ,public SurfaceArea{           // LINE-1
16     int _r;
17 public:
18     Sphere(int a) : _r(a) { }
19     double getVolume() { return Volume::getValue(_r); }      // LINE-2
20     double getSurfaceArea() { return SurfaceArea::getValue(_r); } // LINE-3

```

Course outline

How does an NPTEL online course work?
Week 0**Week 1****Week 2****Week 3****Week 4****Week 5**

- Module 21 :
Inheritance : Part I (Lecture 36)
(unit?
unit=64&lesson=65)

- Module 22 :
Inheritance : Part II (Lecture 37)
(unit?
unit=64&lesson=66)

- Module 23 :
Inheritance : Part III (Lecture 38)

(unit?
unit=64&lesson=67)

- Module 24 :
Inheritance : Part
IV (Lecture 39)
(unit?
unit=64&lesson=68)

- Module 25 :
Inheritance : Part
V (Lecture 40)
(unit?
unit=64&lesson=69)

- Lecture Materials
(unit?
unit=64&lesson=70)

- Quiz :
Assignment 5
(assessment?
name=153)

- W5_Programming-
Qs1**
(/noc20_cs57/progassignment?
name=149)

- W5_Programming-
Qs2
(/noc20_cs57/progassignment?
name=156)

- W5_Programming-
Qs3
(/noc20_cs57/progassignment?
name=157)

- Feedback For
Week 5 (unit?
unit=64&lesson=71)

Week 6

Week 7

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Assignment Solution

Books

```
21 };  
22  
23 int main() {  
24     int a;  
25     cin >> a;  
26  
27     Sphere s(a);  
28     cout << s.getVolume() << ", " << s.getSurfaceArea();  
29  
30     return 0;  
31 }
```

**Live Interactive
Session**