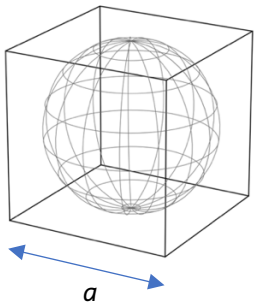
Exam 1_A1-2: Cube and sphere

Objective: **Data types and expressions**

Consider a cube with each edge of length *a* (input) in meters that just perfectly fits a sphere with radius *r* (in meters) inside (with extreme points on sphere surface just touching middle points of cube sides). Write a Python code to accept the cube edge-length *a*, and print out the volume of the cube outside the sphere.



- Volume of a sphere $= \frac{4}{3}\pi r^3$

INPUT

One floating-point value of the cube edge-length *a* in meters.

OUTPUT

The volume of the cube outside the sphere in cubic meters rounded with `round(ans,2)`, where `ans` is your answer.

Examples

Input (from keyboard)	Output (on screen)	The range of inputs for additional test cases: 40%< 3; 80%< 7; the rest > 7.
1.4	1.31	
3.01	12.99	
5.15	65.07	

Testcases (private)

Input (from keyboard)	Output (on screen)
0.57	0.09
2.51	7.53
4.25	36.57
6.13	109.74
7.21	178.56

Code solution

```
import math
a = float(input())
print(round(a**3-4/3*math.pi*((a/2)**3),2))
```