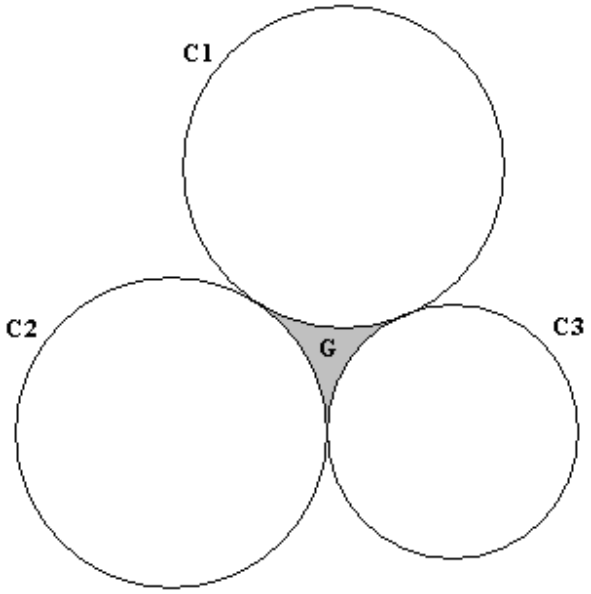
Problem B

Region

Input: Standard Input
Output: Standard Output



From above figure, it is clear that **C1**, **C2** and **C3** circles are touching each other.

Consider,

C1 circle have **R1** radius.
C2 circle have **R2** radius.
C3 circle have **R3** radius.

Write a program that will calculate the area of shaded region **G**

Input

The first line will contain an integer **k (1 ≤ k ≤ 1000)** which is the number of cases to solve. Each of the following k Lines will contain three floating point number **R1 (1 ≤ R1 ≤ 1000)**, **R2 (1 ≤ R2 ≤ 1000)** and **R3 (1 ≤ R3 ≤ 1000)**.

Output

For each line of input, generate one line of output containing the area of **G** rounded to six decimal digits after the decimal point. Floating-point errors will be ignored by special judge program.

Sample Input	Output for Sample Input
2 5.70 1.00 7.89 478.61 759.84 28.36	1.2243 2361.0058

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