Save lazyM's Job

lazyM is working for XYZ company. 1week ago he got a project. Tomorrow is his submission date. He writes below function calculate for this project.

```
double calculate(int n){
    double ans = 0;
    for(double i = 1 ; i <= n ; i+=2){
        for(double j = i ;j <= n ; j++){
            ans += 1./j;
        }
    }
    return ans;
}
```

 But when he runs this code for large **n,** he realizes that code is too slow. If he submits this code, he will lose his job. He know you are a very good programmer, he ask you to write an efficient code for function calculate.

Input :

The first line contains test case T (T<=10000).
Next line contains an integer n**.**
1<=n<=1000000

Output:
Outputs the result of calculate (n) up to 4 digit after decimal point. (Use %.4lf to print the result)

Sample Input	Sample Output
2 1 2	Case 1: 1.0000 Case 2: 1.5000