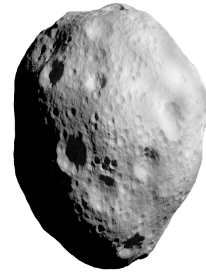


# Task 01: **Asteroids!**

**[30 points]**

Han Solo needs your help in navigating a treacherous asteroid belt! For every asteroid present in the belt, Han's chance of survival decreases. Fortunately, advanced computers have determined how to predict Han's chance of surviving his trip through the asteroid belt.



$$\lambda = \frac{\eta}{\Omega}$$

## **Problem Statement**

Implement the formula above to determine Han's chances of survival.  $\eta$  is a positive integer that represents the number of asteroids in the belt and  $\Omega$  is a positive decimal value that takes into account the asteroid's velocity, volume and trajectory. Calculate  $\lambda$ , the probability that Han perishes, given  $\eta$  and  $\Omega$ .

## **Input Format**

First line contains  $\mathbb{T}$ , which denotes the number of test cases. This is followed by  $\mathbb{T}$  lines, each containing  $\eta$ , the number of asteroids, and  $\Omega$ , the constant.

## **Input Constraints**

- $0 < \eta < 1,000,000$
- $0 < \Omega < 1,000,000$

## **Output Format**

For every input  $\mathbb{T}$ , output the calculated value  $\lambda$ , rounded to two decimal places.

### Sample Input

```
2
54 26.9943
14 16.7373
```

### Sample Output

```
2.00
0.84
```