

11346 Probability

Consider rectangular coordinate system and point $L(X, Y)$ which is randomly chosen among all points in the area A which is defined in the following manner: $A = \{(x, y) | x \in [-a; a]; y \in [-b; b]\}$. What is the probability P that the area of a rectangle that is defined by points $(0,0)$ and (X, Y) will be greater than S ?

Input

The number of tests $N \leq 200$ is given on the first line of input. Then N lines with one test case on each line follow. The test consists of 3 real numbers $a > 0$, $b > 0$ or $S \geq 0$.

Output

For each test case you should output one number P and percentage '%' symbol following that number on a single line. P must be rounded to 6 digits after decimal point.

Sample Input

```
3
10 5 20
1 1 1
2 2 0
```

Sample Output

```
23.348371%
0.000000%
100.000000%
```