

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%
```