Problem TIMEDEFUSAL: Time Defusal

Red alert for the City of London! The new evil overlord Marina — yes, a female overlord — isn't satisfied with blowing up MI6-HQ, but wants to eliminate the entire capital with one gigantic blast. Because she knows of the misfortune of her predecessors — their crucial bombs were all defused — she constructed a very tricky time fuse to set off the bomb.

It consists of two rotating rods which are attached to the ground at one end. The circles described by the rotating end meet at exactly one point — and you guessed right: the fuse triggers if the ends meet.

By interrogating an affiliate of Marina's, 007 received the intelligence where to find the bomb and got there right at the moment as the fuse is armed. He catches the weak point of the device at once: the connection between fuse and bomb itself. Knowing where to attack, can you tell Bond how long he has to disarm the bomb?

Input

On the first line the number of test cases N ($1 \le N \le 1\,000$). Then for each test case two lines containing three integers; c_i the circumference, v_i the velocity of the rotating end and d_i the length of the segment of the circle between the initial point of the rotor to the point where the circles intersect (in the direction of movement), where $0 < c_i, v_i \le 55\,000$, $0 \le d_i < c_i$ and $i \in \{1, 2\}$.
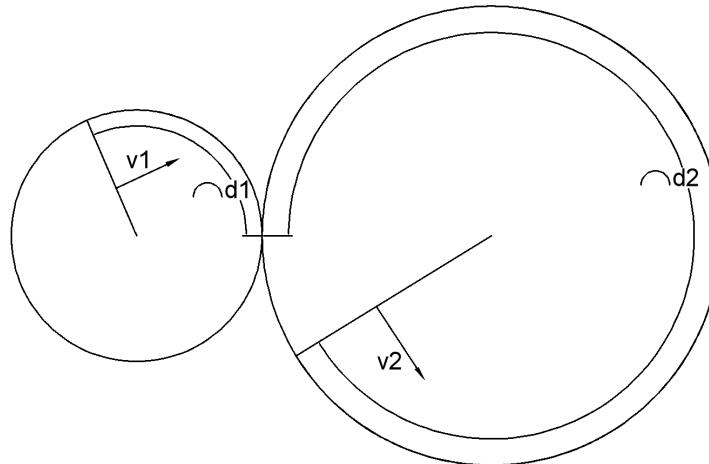
Figure 1: Visualisation of d_i

Output

For each test case a single line containing the time Bond has to disarm the bomb with relative or absolute error $\le 10^{-5}$. If the bomb never triggers print "oo" (two small 'O').

Sample Input 1

```
4
23 2 1
42 14 35
23 2 1
42 14 34
23 3 1
42 14 35
50 4 2
23 234 0
```

Sample Output 1

```
23.5
oo
oo
138
```