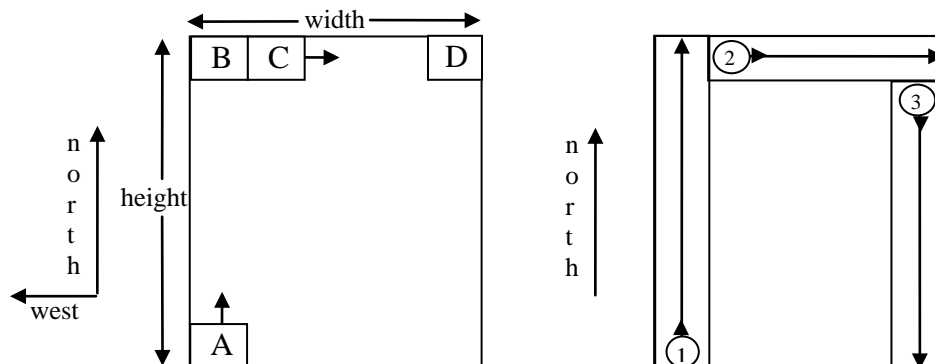


Mower

Input File: MowerIn.txt

Logan cuts rectangular lawns, whose height is always larger than its width, using a lawn mower whose blades are arranged in such a way that it cuts a square patch of lawn. As shown on the left side of the below figure, he begins by placing the left side of the mower on the west edge of the lawn, and the rear edge of the mower on the south edge of the lawn (A). Then he proceeds straight ahead until the front of the mower reaches the uncut edge of the lawn (B). If there is more lawn to cut, he makes a 90 degree right turn pivoting on the mower's back right wheel (C), and then proceeds straight ahead until the front of the mower reaches the uncut edge of the lawn (D). He repeats this process as shown on the right side of the below figure, which shows the first three cuts, until the entire lawn is cut.



Your task is to determine how many seconds it takes him to cut the lawn, given the width of the lawn mower's square cut, the height and width of the lawn, his walking speed, and the time it takes him to make a 90 degree turn. Do *not* include the time it takes to place the mower on the lawn at its initial position (i.e., position A shown on the left side of the above figure).

Inputs:

The first line of input contains the number of lawns to cut. This will be followed by one line of input per lawn that contains five doubles: the width of the lawn mower's square cut in feet, followed by the height and width of the lawn in feet, his walking speed in feet per second, and the time it takes him to make a 90 degree turn in seconds. The inputs on one line will be separated by a space.

Outputs:

There will be one line of output per lawn containing the number of seconds required to cut that lawn, rounded to the nearest hundredth of a second.

Sample Input

```
6
5.0 185.0 5.0 3.0 2.0
5.0 185.0 10.0 3.0 1.0
5.0 185.0 15.0 3.0 1.0
5.0 14.0 11.0 3.0 1.0
5.0 18.0 11.0 3.0 1.0
2.0 100.0 40.0 3.0 1.0
```

Sample Output

```
60.00
120.33
180.67
8.67
12.33
624.67
```