

The Thimphu Bus Rush

Time: 1s | Memory: 256 MB

Problem Statement

Sonam needs to reach the Thimphu Bus Stand in the morning, and he prefers walking. His friend Thinley, who stays in Babesa and owns a car, offers to drop him off. The road between Babesa and the Bus Stand is exactly 5000 meters long.

Sonam has friends living all along the road, so he can spend the night at any point on the way. He wants to stay as close to Babesa as possible (walk as much as possible), but still arrive at the Bus Stand no later than Thinley would by driving the full route from Babesa.

- Thinley always drives the full d meters from Babesa at a constant speed v_{car} .
- If Sonam stays at a point x meters from Babesa, he walks the remaining $d - x$ meters at a constant speed v_{person} .

Your task is to find the smallest integer value of x (in meters from Babesa) such that Sonam's walking time from x to the Bus Stand is less than or equal to Thinley's driving time from Babesa to the Bus Stand.

Use the standard relation $time = distance / velocity$. All velocities are in kilometers per hour (KMPH); x and d are in meters.

Input Format

$d = 5000$ (fixed - total distance - in meters, of the road between Babesa and Thimphu Bus stand)

v_{car} = Constant Driving Velocity of Thinley's car in KMPH

v_{person} = Constant Walking Velocity of Sonam in KMPH

Note that v_{car} is always greater than v_{person}

A single line with three integers:

d v_{car} v_{person}

Example

5000 50 20

Output Format

Print the point x (in meters from Babesa) where Sonam walking from x to the bus stand is equal to Thinley driving from Babesa to the bus stand considering the v_{car} and v_{person} from the input parameters.

Note that the output should be rounded off to ceiling integer, e.g. 3000.3 meters should be rounded up to 3001 in the output

Sample Input I

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5000 60 30
```

Sample Output I

```
2500
```

Sample Input II

```
5000 100 3
```

Sample Output II

```
4850
```

Sample Input III

```
5000 20 4
```

Sample Output III

```
4000
```