10 Meeting Across Dune

4 points

Introduction

In the Dune universe, ornithopters are the primary mode of transportation on desert planet Arrakis. It is basically an aircraft that flies by flapping its wings.

Two ornithopters set out from distinct cities with the intention of meeting each other somewhere along the way, although not precisely at the midpoint due to their different speeds. Assuming a straight-line path between the two cities, you will be provided with the distance between the cities in kilometers and the speed values of the two ornithopters in kilometers per hour. Both ornithopters follow a uniform linear motion, meaning that the acceleration is 0 throughout the motion. Your objective is to determine the distance from the first city to their meeting point with a precision of three decimal places.

Input

Three lines containing each line a single integer value referring to:

- Distance between cities in kilometers
- First ornithopter speed in kilometers per hour
- Second ornithopter speed in kilometers per hour

Output

The distance in kilometers from the first city and the rendezvous point with a precision of three decimal places, that is the distance flown by first ornithopter before they meet.

Example 1

Input

```
30
1
2
```

Output

```
10.000
```

Example 2

Input

```
20
1
2
```

Output

```
6.667
```

Example 3

Input 3

```
20
2
1
```

Output

```
13.333
```