Problem L. RecipeFraction

Problem Statement

Each element of **recipe** has the form (quotes for clarity) "Amount Ingredient" where Amount is a positive integer. For example, "4 SUGAR" means the recipe calls for 4 units of SUGAR. Return what fraction of the total recipe is accounted for by the elements of **ingredients** (see examples for further clarifications).

Definition

Class: RecipeFraction
Method: getFraction
Parameters: String[], String[]
Returns: double
Method signature: double getFraction(String[] recipe, String[] ingredients)
(be sure your method is public)

Notes

- The return value must be within 1e-9 absolute or relative error of the actual result.

Constraints

- **ingredients** will contain between 1 and 50 elements inclusive.
- Each element of **ingredients** will contain between 1 and 50 characters inclusive.
- Each element of **ingredients** will contain only uppercase letters ('A'-'Z').
- Each element of **ingredients** will be distinct.
- **recipe** will contain between 1 and 50 elements inclusive.
- Each element of **recipe** will contain between 3 and 50 characters inclusive.

-

Each element of **recipe** will have the format (quotes for clarity) "Amount Ingredient" where Amount is an integer with no leading zeros between 1 and 10 inclusive, and Ingredient is a positive length string of uppercase letters.

- Each Ingredient in **recipe** will be distinct.

Examples

0)

```
{"2 GRAPES",
 "1 APPLES",
 "3 STRAWBERRIES"}


{"APPLES"}


Returns: 0.16666666666666666
```

The recipe requires 2+1+3 = 6 total units. APPLES account for 1/6 of the total.

1)

```
{"2 GRAPES",
 "1 APPLES",
 "3 STRAWBERRIES"}


{"GRAPES"}


Returns: 0.3333333333333333
```

GRAPES account for 2/6 of the total recipe.

2)

```
{"2 GRAPES",
 "1 APPLES",
 "3 STRAWBERRIES"}

{"FROGS"}

Returns: 0.0
```

There are no FROGS in our recipe.

3)

```
{"1 A","1 B","1 C","5 D","4 E"}

{"A","E"}

Returns: 0.4166666666666667
```

The recipe requires 1+1+1+5+4=12 total units. A and E account for 1+4=5 of these 12.

4)

```
{"9 A","1 B","10 C","5 D","4 E"}

{"A","B","F"}

Returns: 0.3448275862068966
```
