

12 Environmental footprint

6 points



Introduction

Nowadays, we can buy food that comes from anywhere in the world. But this does not come for free from an environmental point of view. To transport the products from their origin to their final destination, it is needed a certain amount of energy and production carbon emissions (CO₂) is required. Sometimes, the transportation of the product requires more energy than the energy that the product gives us when eating it. The following table shows an estimate of the energy and carbon emissions per kilometers and tone for a variety of different vehicles.

Transport	Energy (MJ/(t·km))	Carbon emissions (g/(t·km) of CO ₂)
Ship	0,3	23,3
Train	0,32	23,1
Road	2,12	160,1
Plane	21,01	1577,1

Given the energy by eating the product (MJ/t) and the transportation vehicle, calculate the maximum amount of kilometers that can be reached so that the energy required for the transportation does not exceed the energy produced by the product. Then, find out the associated carbon emissions produced by the transportation. For both values provide just 1 decimal of precision.

Input

The input is a sequence of lines, where each line contains a mean of transportation and the energy produced by the food in MJ/t. The sequence ends with the character #.

Output

The output is a triplet for each line of the input. Each triplet consists of:

- The mean of the transportation.
- The maximum number of km that can travelled while the energy required does not exceed the energy produced by the food.
- The CO₂ emissions produced by the transportation for the maximum number of km.

Example

Input

```
Ship 10650  
Plane 10650  
#
```

Output

```
Ship 35500.0 827150.0  
Plane 506.9 799434.3
```