MCU Cargo

Time limit: 1s

MCU cargo is an international cargo service by sea owned by Dr Stephen Vincent S. It currently has more than 13.000 customers across 7 countries: Indonesia, Australia, China, Japan, Vietnam, Singapore, and Thailand. Due to the pandemic, the customers have been tripled and it is difficult for the staff to do the administrative work, which is manual for a long time. The owner, Dr Stephen asks you for help!

There is a need for a program that can calculate the shipping fee. The fee itself consists of ~~three~~ four parts: the weight fee, the tax fee, the international shipping fee, and the local delivery fee.

The weight fee is based on the total weight of the items (i.e., boxes or bags) times $12. However, if the size of an item is more than 40m x 40cm x 40cm, the weight fee will be the volume (in centimetres) divided by 400, rounded down.

The tax fee equals to total weight of the new items times $5.

The international shipping fee is calculated per item: $50 per 7 kilograms, rounded up.

The local delivery fee is the weight fee times distance to the recipient's address (in kilometres) divided by a thousand, rounded down.

Input:

The program accepts a positive integer no larger than 100 as the number of items. Per item, the program accepts a string for the item status (new/used), three integers for dimensions in centimetres (max 10 m per dimension due to the ship capacity), and another integer for the weight in kilogram (max 300 kg per item, again due to the ship capacity). At the end of the input sequence, the program accepts total distance to the recipient's address in kilometres (max 30,000).

Output:

The total fee (obvious right?)

Example input:

3 # number of items

new # first item status (new or used)

40 30 20 # first item size

15 # first item weight

used # second item status (new or used)

60 40 40 # second item size

10 # second item weight

used # third item status (new or used)

100 100 100 # third item size

5 # third item weight

153 # total distance to the recipient's address

Example output:

3741