**Vehicles**

Write a program that models 3 vehicles (a Car, a Truck and a Bus) and simulates driving and refueling them.

Vehicles have fuel quantity, fuel consumption in liters per km, tank capacity and can be driven a given distance and refueled with a given amount of fuel.

It’s summer, so vehicles use air conditioners and their fuel consumption per km is increased by 0.9 liters for the car, 1.6 liters for the truck and 1.4 liters for the bus.

Also, the truck has a tiny hole in its tank and when its refueled it keeps only 95% of the given fuel. The car and the bus have no problems and add all the given fuel to their tank. If a vehicle cannot travel the given distance, its fuel does not change.

You can drive the bus with or without people. With people, the air-conditioner is turned on and its fuel consumption per kilometer is increased by 1.4 liters. If there are no people in the bus, the air-conditioner is turned off and does not increase the fuel consumption.

**Input**

• On the first three lines you will receive information about the vehicles in the format:

* "Vehicle {initial fuel quantity} {liters per km} {tank capacity}"

• On the fourth line – the number of commands N that will be given on the next N lines

• On the next N lines – commands in format:

* "Drive Car {distance}"
* "Drive Truck {distance}"
* "Drive Bus {distance}"
* "DriveEmpty Bus {distance}"
* "Refuel Car {liters}"
* "Refuel Truck {liters}"
* "Refuel Bus {liters}"

**Output**

• After each Drive command, if there was enough fuel, print on the console a message in the format:

* "Car/Truck travelled {distance} km"

• If there was not enough fuel, print:

* "Car/Truck needs refueling"

• If you try to refuel with an amount ≤ 0 print:

* "Fuel must be a positive number"

• If the given fuel cannot fit in the tank, print:

* "Cannot fit {fuel amount} fuel in the tank"

• After the End command, print the remaining fuel for all vehicles, rounded to 2 digits after the floating point in the format:

* "Car: {liters}"
* "Truck: {liters}"
* "Bus: {liters}"

**Example**

|  |  |
| --- | --- |
| Input | Output |
| Car 35 0,04 80  Truck 120 0,5 350  Bus 45 0,3 150  8  Refuel Car -20  Refuel Truck 0  Refuel Car 20  Refuel Car 200  Drive Bus 15  Refuel Bus 1300  DriveEmpty Bus 90  Refuel Truck 850 | Fuel must be a positive number  Fuel must be a positive number  Cannot fit 200 fuel in the tank  Bus travelled 15 km  Cannot fit 1300 fuel in the tank  Bus needs refueling  Cannot fit 850 fuel in the tank  Car: 55,00  Truck: 120,00  Bus: 19,50 |