Use your solution of the **previous** task for the starting point and add more functionality. Add a new vehicle – **Bus**. Add to every **vehicle**a new property – **tank** **capacity**. A vehicle cannot **start** **with** or **refuel** **above** its **tank** **capacity**.

If you **try to put more fuel** in the tank than the **available space,** print on the console **"Cannot fit {fuel amount} fuel in the tank"** and **do not add any fuel** in the vehicle’s tank. If you try to **create** a vehicle with **more** **fuel** than its **tank** **capacity**, **create** it but start with an **empty** **tank**.

Add a **new command** for the bus. 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 on the bus**, the air-conditioner is **turned off** and **does not increase** the fuel consumption.

Finally, add **validation** for the **amount** of **fuel** given to the **Refuel** **command** – if it is 0 or negative, print **"Fuel must be a positive number"**.

### 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 30 0.04 70  Truck 100 0.5 300  Bus 40 0.3 150  8  Refuel Car -10  Refuel Truck 0  Refuel Car 10  Refuel Car 300  Drive Bus 10  Refuel Bus 1000  DriveEmpty Bus 100  Refuel Truck 1000 | Fuel must be a positive number  Fuel must be a positive number  Cannot fit 300 fuel in the tank  Bus travelled 10 km  Cannot fit 1000 fuel in the tank  Bus needs refueling  Cannot fit 1000 fuel in the tank  Car: 40.00  Truck: 100.00  Bus: 23.00 |