

# Tariff Comparison

Ovo Energy provides a number of tariffs to suit differing customer needs. Your task is to write a program which matches tariffs to customers based on usage:

- Represent tariffs according to how much energy is consumed.
- Calculate annual energy usage based on a target monthly expenditure.

## Input

Your program should support two commands:

*cost* <POWER\_USAGE> <GAS\_USAGE>

For the given annual kWh consumption(s), output an annual cost inclusive of VAT for applicable tariffs, sorted by cheapest first. Each tariff should be printed on its own line in the format *TARIFF\_NAME COST*. If any usage is 0 assume the customer is not being supplied for that fuel type.

*usage* <TARIFF\_NAME> <FUEL\_TYPE> <TARGET\_MONTHLY\_SPEND>

For the specified tariff calculate how much energy (in kWh) would be used annually from a monthly spend in pounds (inclusive of VAT). Fuel type can be of power or gas. Output should just be the total annual consumption.

## Resources

*prices.json* contains a set of rates that describe how much the customer will be charged for each kilowatt-hour (kWh) of energy they use. Tariffs are divided into power and/or gas. Additionally, a tariff defines a monthly standing charge (exclusive of VAT) which is applied to each energy type separately.

Prices are defined as £/kWh exclusive of VAT. VAT is then applied at 5%.

## Solution

Please complete your solution in the language you are most comfortable in. Plenty of descriptive comments are welcome.

All output values should be rounded to 2 decimal places.

Your code should be submitted in an archive that contains all sources and a *README* with instructions on how to run and any compiler version requirements. Your program will be expected to run on OSX or Linux.