## **OData service | 2 point(s)**

The Open Data Protocol (OData) is a data access protocol created by Microsoft that builds on simple REST principles. Your task is to retrieve certain data from a sample (live) OData service.

For this problem you will be working with the OData service located [here](http://services.odata.org/Northwind/Northwind.svc/) (<http://services.odata.org/Northwind/Northwind.svc/>). You will retrieve data from an entity set called ‘Products’. An entity set is equivalent to a table in a relational database. The Products entity set is located [here](http://services.odata.org/Northwind/Northwind.svc/Products)(<http://services.odata.org/Northwind/Northwind.svc/Products>).

Your input file will consist of a series of simple queries to perform on the Products entity set. The input will contain a $filter expression to perform on Products. This is equivalent to a WHERE clause in SQL. Your job is simply to see how many entities (rows in a table) are returned from the specified query.

Normally a request to the endpoint specified above would return product data - but since you are only interested in the number of entities that would be returned, you can send requests to this special $count [endpoint](http://services.odata.org/Northwind/Northwind.svc/Products/%24count)   
(<http://services.odata.org/Northwind/Northwind.svc/Products/$count>). After sending an appropriate request to this endpoint, it will respond with the number of entities that match the query. Print out this value on a line in the output file. Your output file will have one line per line of input containing one number.

Input description/format

The input will be a series of $filter queries to perform. Each line of input will correspond to a single query.

For instance, the input line:   
Discontinued eq true

should send a GET request to the following URL: http://services.odata.org/Northwind/Northwind.svc/Products/$count?$filter=Discontinued eq true

Output description/format

Your output will be a single number per line of input, indicating how many entities match the given query.

Example input

Discontinued eq true

SupplierID eq 4

CategoryID eq 2

Example output

8

3

12

Practice

Discontinued ne true and CategoryID eq 3

25 eq ReorderLevel

substringof('pkg', QuantityPerUnit) and substringof(' - ', QuantityPerUnit)

UnitsOnOrder gt 20

CategoryID le 3 or UnitsOnOrder ge 4

4 eq SupplierID or substringof('cans', QuantityPerUnit)

UnitsInStock lt 4 and SupplierID eq 3

not Discontinued and UnitsInStock lt 10

substringof('Dried', ProductName) or substringof('dried', ProductName)

CategoryID eq 7

Discontinued eq true

SupplierID eq 4

CategoryID eq 2

substringof('bottle', QuantityPerUnit)

startswith(ProductName, 'Louisiana')

UnitsInStock lt 20 and SupplierID eq 1

ReorderLevel lt 10 and (SupplierID eq 1 or SupplierID eq 3)

SupplierID eq 2

Discontinued ne true

substringof('jar', QuantityPerUnit) or substringof('can', QuantityPerUnit)

CategoryID le 3 or SupplierID ge 4

2 ge SupplierID or UnitsOnOrder ge 100

UnitsOnOrder ge 100

Discontinued and SupplierID eq 1 and substringof('a', ProductName)

SupplierID eq 2 or substringof('ml', QuantityPerUnit)