Calculating memory

We tried to create a task about space complexity... and this is the result.

You are trying to create n 1-dimension arrays in a C++ program. The i-th ($1 \leq i \leq n$) array among them has type t_i and its size is s_i. Please make a program that calculates the number of bytes that these n arrays occupy.

Input

Your input consists of an arbitrary number of records, but no more than 100.

Each record starts with a line containing an integer n ($1 \leq n \leq 10$). Next n lines describe the arrays. The i-th line contains a string t_i ($t_i \in$ {'int', 'bool', 'char', 'double', 'float'}) and an integer s_i ($2 \leq s_i \leq 10^5$), which means the i-th array has type t_i and its size is s_i.

The end of input is indicated by a line containing only the value -1.

Output

For each input record, print the number of bytes occupied by all the arrays.

Example

Standard input	Standard output
1 int 10 3 bool 2 char 3 double 4 -1	40 37

Time Limit

1 second.

Hint