Bar Code

Computer Science Society
Programming Contest
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A store sells items, some (hopefully most) of which are in the inventory and some of which aren't. Each item is marked with a 24-bit bar code identifier, and has a price in whole dollars. In this problem, you are given an inventory of items and their prices, followed by an order for some quantities of items, and will output the total quantity and cost of ordered items that can be delivered from the inventory.

Since three bits exactly represent one octal digit, a 24-bit bar code, e.g.

`101011001000110111010011`

can be exactly represented by eight octal digits, e.g.

`53106723`.

That's an annoying complication below, but so be it.

Input Format

The first line of input contains the number $n>0$ of distinct items in the inventory. The following n lines of input constitute the inventory, each containing an item identifier—eight octal digits—and a price $p>0$ in whole dollars. We assume (conveniently, but oddly) that if an item is in the inventory, there is a sufficient quantity on hand to fill all orders. The remaining lines of input constitute the order, each containing a quantity $q>0$ and the identifier—a 24-bit bar code—of an item being ordered.

Output Format

Report each ordered item (in octal) that isn't in the inventory. Compute and report the total quantity and cost of the ordered items that are in the inventory, and report those totals as shown in the sample output below.

Input Sample

```
3
53106723 29
37010466 65
24700351 102
10 101011001000110111010011
1 111111000000111111000000
2 010100111000000011101001
3 010010101101010011111000
5 011111000001000100110110
```

Output Sample

```
item 77007700 not in inventory
item 22552370 not in inventory
deliver 17 items from inventory, total cost = $819
```