Map: Delete

For a dictionary M that stores elements formed by a pair of a string key and an integer value, perform a sequence of the following operations. Note that each key in M must be unique.

- insert(key, x): Insert an element formed by a pair of key and x to M.
- get(key): Print the value with the specified key. Print 0 if there is no such element.
- delete(key): Delete the element with the specified key.

Input

The input is given in the following format.

q
$query_1$
$query_2$
:
$query_q$

Each query $query_i$ is given by

`0` key x

or

`1` key

or

`2` key

where the first digits 0, 1 and 2 represent insert, get and delete operations respectively.

Output

For each get operation, print an integer in a line.

Constraints

- $1 \leq q \leq 200,000$
- $1 \leq x \leq 1,000,000,000$
- $1 \leq$ length of $key \leq 20$
- key consits of lower case letters

Sample Input 1

```
8
0 blue 4
0 red 1
0 white 5
1 red
1 blue
2 red
1 black
1 red
```

Sample Output 1

```
1
4
0
0
```