

# SAC '22 Code Challenge 3 Junior P4 - Normal Conversions

---

**Time limit:** 1.0s    **Memory limit:** 256M  
Java: 1.5s

---

Having spent his last V-Buck, Max was upset, so Bob Xiong decided to cheer him up.

Bob told Max that he would buy him a Fortnite skin if he could solve this problem:

Given  $Q$  queries, convert a base  $b_1$  number,  $n$ , to base  $b_2$ .

Since Max knows you are a great programmer, Max has asked you to help him.

Can you help Max solve his V-Buck crisis?

## Constraints

---

$$1 \leq Q \leq 10^5$$

$$2 \leq b_1, b_2 \leq 10$$

$$1 \leq n_{10} \leq 10^9$$

Note that  $n_{10}$  represents  $n$  in base 10.

### Subtask 1 [30%]

$b_1$  and  $b_2$  are each either 2 or 10.

### Subtask 2 [70%]

No additional constraints.

## Input Specification

---

The first line will contain  $Q$ , the number of queries.

The next  $Q$  lines will contain  $b_1$ ,  $n$ , and  $b_2$ , the current base of the number, the number in that base, and the next base of the number, respectively.

## Output Specification

---

Output  $Q$  lines, the number converted from base  $b_1$  to base  $b_2$ .

**Note that there should be no leading zeroes after converting.**

## Sample Input 1

---

```
2
2 101 10
10 64 2
```

## Sample Output 1

---

```
5
1000000
```

## Sample Input 2

---

```
2
3 22 10
10 6 4
```

## Sample Output 2

---

```
8
12
```