

## SPOJ Problem Set (classical)

### 3442. The last digit

#### Problem code: LASTDIG

Nestor was doing the work of his math class about three days but he is tired of make operations a lot and he should deliver his task tomorrow. His math's teacher gives two numbers  $a$  and  $b$ . The problem consist in find the last digit of the potency of base  $a$  and index  $b$ . Help Nestor with his problem. You are given two integer numbers: the base  $a$  ( $0 < a < 20$ ) and the index  $b$  ( $0 \leq b \leq 2,147,483,000$ ). You have to find the last digit of  $a^b$ .

#### Input

The first line of input contains an integer  $t$ , the number of test cases ( $t \leq 30$ ).  $t$  test cases follow. For each test case will appear  $a$  and  $b$  separated by space.

#### Output

For each test case output an integer per line representing the result.

#### Example

**Input :**

```
2
3 10
6 2
```

**Output :**

```
9
6
```

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Added by: Jose Daniel Rdguez

Date: 2008-12-01

Time limit: 1s

Source limit:700B

Languages: All

Resource: Mine