Problem A. The gambler

Input file: standard input
Output file: standard output

Time limit: 1 second Memory limit: 256 megabytes

Kenny Rogers was travelling by train when he met up a gambler who challenged him to play a game. The gambler says a random number N, Kenny choose a number M > N and the gambler needs to predict that number chosen by Keeny.

Kenny choose only lucky numbers. A number considered lucky if it has no more than 1 non-zero digit. So numbers 100,4000, 10 are lucky and 12,15,202,11000 are not lucky.

Kenny needs to know the distance between N and the next lucky number to calculate his probability to win.

Input

First line contains T number of test cases. Next T lines contains $N(1 \le N \le 10^9)$.

Output

For each test case, output the distance between N and the next lucky number.

Example

standard input	standard output
5	10
10	9000
11000	99
201	1000
4000	1
4	