1109 – False Ordering

We define **b** is a Divisor of a number **a** if **a** is divisible by **b**. So, the divisors of 12 are 1, 2, 3, 4, 6, 12. So, 12 has 6 divisors.

Now you have to order all the integers from 1 to 1000. **x** will come before y if

1) number of divisors of **x** is less than number of divisors of **y**
2) number of divisors of **x** is equal to number of divisors of **y** and **x > y**.

Input

Input starts with an integer **T (≤ 1005)**, denoting the number of test cases.

Each case contains an integer **n (1 ≤ n ≤ 1000)**.

Output

For each case, print the case number and the **n**th number after ordering.

Sample Input	Output for Sample Input
5 1 2 3 4 1000	Case 1: 1 Case 2: 997 Case 3: 991 Case 4: 983 Case 5: 840