1138 – Trailing Zeroes (III)

You task is to find minimal natural number **N**, so that **N!** contains exactly **Q** zeroes on the trail in decimal notation. As you know **N! = 1*2*...*N**. For example, 5! = 120, 120 contains one zero on the trail.

Input

Input starts with an integer **T (≤ 10000)**, denoting the number of test cases.

Each case contains an integer **Q (1 ≤ Q ≤ 10^8)** in a line.

Output

For each case, print the case number and **N**. If no solution is found then print **'impossible'**.

Sample Input	Output for Sample Input
3 1 2 5	Case 1: 5 Case 2: 10 Case 3: impossible