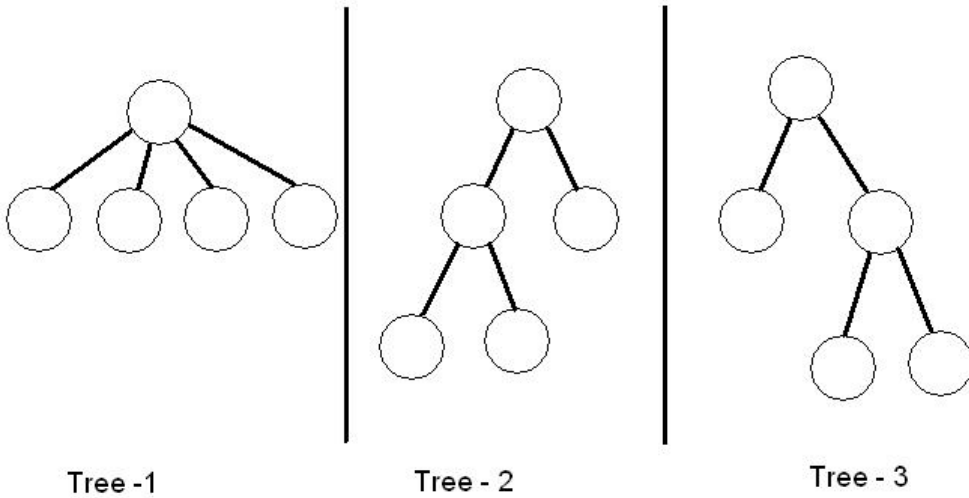


In this problem you are to find the number (Let  $P$ ) of ordered trees where each of the tree consists of exactly  $m$  edges and each of the nodes has out-degree either exactly two or zero and the root has even out-degree. For example, if there are four edges, we get the following three trees.



## Input

The first line in the input file is an integer representing the number of test cases. Each of the test cases follows below. Each case consists an integer representing various even values of  $m$  ( $2 \leq m \leq 500$ ).

## Output

For each test case, first print the serial number of the case and then print the value of  $P$  separated by an space from the serial number. You should use Big Integer operation to print  $P$  and  $P$  has maximum 200 digits.

## Sample Input

```
3
4
10
14
```

## Sample Output

```
Case 1: 3
Case 2: 126
Case 3: 1716
```