Problem 5—Tribute List

At the end of the Hunger games, the final ranking is displayed on the big board, e.g. District 4 Male, District 7 Female, District 12 Female, etc. However, the board has malfunctioned, and the sex of the tributes is no longer visible. Each district has one male and one female tribute, and therefore two listings on the big board. If, for example, there were two districts participating, the big board could be in one of six possible configurations: 1122, 1212, 1221, 2112, 2121, 2211. Given the number of districts, you are to compute the number of possible configurations of the big board. This number could be very large.

INPUT SPECIFICATION. The input is divided into a number of cases. Each case will consist of an unsigned positive decimal integer representing the number of districts. A zero will follow the last case. There may be any number of spaces or **<EOLN>**'s before, after, or between the input cases.

OUTPUT SPECIFICATION. The output cases should be in the same order as the input cases. Each output case should be in the format "Case *c*: There are *o* possible orderings." where *c* is the case number and *o* is the *exact* number of possible configurations, however large, of the big board. Each case should be followed by **<EOLN>**.

SAMPLE INPUT.

```
2<EOLN>
3<EOLN>
50<EOLN>
0<EOLN>
<EOF>
```

SAMPLE OUTPUT.

```
Case·1:·There·are·6·possible·orderings.<EOLN>
Case·2:·There·are·90·possible·orderings.<EOLN>
Case·3:·There·are·8289033054959573892412837535227749840302277585413792368437
75436718019022859048977460196496524216398837958212205265551360000000000000000
0000000·possible·orderings.<EOLN>
<EOF>
```