

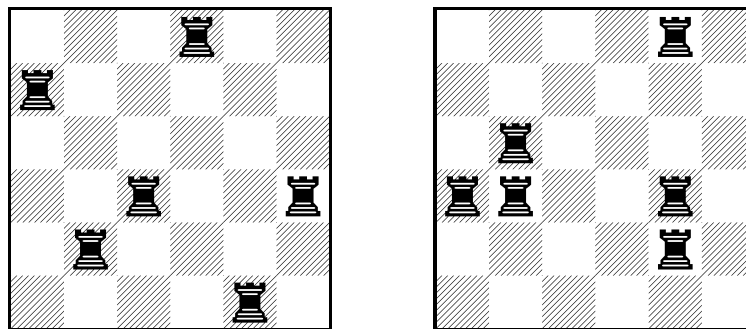
## Aggressive rooks

P94143\_en

Primer Concurs de Programació de la FME (2004-04-29)

Consider a chessboard with  $n$  rows and  $n$  columns. In how many ways can we place  $n$  rooks so that at least two rooks threaten each other?

For instance, these are two of the ways for  $n = 6$ :



### Input

Input consists of several numbers  $1 \leq n \leq 6$ . A special case with  $n = 0$  marks the end of input.

### Output

For every  $n$ , print the number of different ways to place  $n$  rooks on a chessboard  $n \times n$  so that at least two rooks threaten each other. For every  $1 \leq n \leq 6$ , this number has less than 10 digits.

### Sample input

```
2
3
0
```

### Sample output

```
4
78
```

### Problem information

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