Roses and pots (1) P88410_en

You have roses of three different colors. In particular, you have n roses of each color. Please print all the ways to plant all the roses in a line of $3n$ pots, one rose per pot, in such a way that there is exactly one pair of adjacent roses of the same color. The roses of the same color are indistinguishable.

Input

Input consists of several cases, each with n. Assume $1 \leq n \leq 6$.

Output

For every case, print all the solutions in lexicographical order. Use numbers starting at one to identify each color. Print a line with 10 asterisks after every case.

Sample input 1

```
1
2
```

Sample output 1

```
**********
112323
113232
121233
121332
122313
123312
123321
131223
131322
132213
132231
133212
211323
212133
212331
213312
213321
221313
223131
231123
231132
232113
232311
233121
311232
312213
312231
313122
313221
321123
321132
322131
323112
323211
331212
332121
**********
```

Problem information

Author: Salvador Roura

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