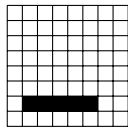


L-Tiling

Description



You have a $2^n \times 2^n$ grid, but unfortunately one cell of them is broken.



Input

An integer n .

Output

Please output a shortest list of movement in the above format.

Technical Specifications

- It is guaranteed that $1 \leq n \leq 15$.

Sample Input 1

1

Sample Output 1

Move disk 1 from 1 to 3.

Sample Input 2

2

Sample Output 2

```
Move disk 1 from 1 to 2.  
Move disk 2 from 1 to 3.  
Move disk 1 from 1 to 2.
```