Photographs and Codes

Time Limit: 1.0s   **Memory Limit:** 256M

Deren and Fahri wants to decorate CClub's clubroom. So they buy a board of size N units by M units and divide it to one unit by one unit sized squares. Deren puts up some one unit by one unit sized landscape photographs. Then Fahri fills up the remaining space with some interesting code samples.

Since elite members of CClub have a unique sense of aesthetic, there must be an even number of photographs in each row and column for Deren and Fahri to be satisfied.

Your task is to find the number of satisfying ways of placing the photographs on the board. Two photograph placements are different if at least one photograph's place is different.

Input

Two integers N and M separated by a single space.

Output

Number of satisfying ways of placing the photographs.

Constraints

- $1 \leq N, M \leq 4$

Example

Input:

```
2 3
```

Output:

```
4
```

Notes

On the example input/output, satisfying placements are the following: (P: photographs, C: code

samples)

```
C  C  C
C  C  C
```

```
P  P  C
P  P  C
```

```
C  P  P
C  P  P
```

```
P  C  P
P  C  P
```