Sicily

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1029. Rabbit

Total: 13064   Accepted: 3528   Rating: 3.4/5.0(60 votes)   0 ▼

Time Limit: 1sec   Memory Limit:32MB

Description

The rabbits have powerful reproduction ability. One pair of adult rabbits can give birth to one pair of kid rabbits every month. And after m months, the kid rabbits can become adult rabbits.

As we all know, when m=2, the sequence of the number of pairs of rabbits in each month is called Fibonacci sequence. But when m<>2, the problem seems not so simple. You job is to calculate after d months, how many pairs of the rabbits are there if there is exactly one pair of adult rabbits initially. You may assume that none of the rabbits dies in this period.

Input

The input may have multiple test cases. In each test case, there is one line having two integers m(1<=m<=10), d(1<=d<=100), m is the number of months after which kid rabbits can become adult rabbits, and d is the number of months after which you should calculate the number of pairs of rabbits. The input will be terminated by m=d=0.

Output

You must print the number of pairs of rabbits after d months, one integer per line.

Sample Input   Copy

```
2 3
3 5
1 100
0 0
```

Sample Output   Copy

```
5
9
1267650600228229401496703205376
```

Problem Source: ZSUACM Team Member

Status   Submit   Source Code