Some sequences of bits (3)   P59506_en

Write a program that prints the number of sequences made up of exactly z zeros and u ones that are multiple of three when considered as a binary number. Note that numbers that begin with one or more zeros are allowed here.

For instance, there are 9 sequences for $z = 2$ and $u = 4$:

001111   011011   011110   100111   101101   110011   110110   111001   111100

Input

Input consists of several pairs of natural numbers z and u, each between 0 and 30.

Output

For every pair of z and u, print the required number.

Sample input

```
0 0
2 4
30 30
```

Sample output

```
1
9
39433695205465102
```

Problem information

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