

Project Euler #166: Criss Cross

This problem is a programming version of [Problem 166](#) from [projecteuler.net](#)

A 4×4 grid is filled with digits $d, 0 \leq d \leq 9$.

It can be seen that in the grid

```
6 3 3 0
5 0 4 3
0 7 1 4
1 2 4 5
```

the sum of each row and each column has the value **12**. Moreover the sum of each diagonal is also **12**.

In how many ways can you fill a 4×4 grid with the digits $d, 0 \leq d \leq n$ so that each row, each column, and both diagonals have the same sum?

Input Format

One integer is given on first line representing n

Constraints

- $0 \leq n \leq 7$

Output Format

Print one integer which is the answer to the problem.

Sample Input 0

```
1
```

Sample Output 0

```
34
```