

Project Euler #168: Number Rotations



This problem is a programming version of [Problem 168](#) from [projecteuler.net](#)

Consider the number **142857**. We can right-rotate this number by moving the last digit (**7**) to the front of it, giving us **714285**.

It can be verified that $714285 = 5 \times 142857$.

This demonstrates an unusual property of 142857: it is a divisor of its right-rotation.

Find the last 5 digits of the sum of all integers n , $10 < n < 10^m$, that have this property.

Input Format

One integer is given on first line representing m .

Constraints

- $2 \leq m \leq 100$

Output Format

Print one integer which is the answer to the problem.

Sample Input 0

2

Sample Output 0

495