Project Euler #43: Sub-string divisibility

This problem is a programming version of Problem 43 from projecteuler.net

The number, 1406357289, is a 0 to 9 pandigital number because it is made up of each of the digits 0 to 9 in some order, but it also has a rather interesting sub-string divisibility property.

Let d_1 be the 1^{st} digit, d_2 be the 2^{nd} digit, and so on. In this way, we note the following:

$$d_2d_3d_4 \text{ is divisible by } 2$$
$$d_3d_4d_5 \text{ is divisible by } 3$$
$$d_4d_5d_6 \text{ is divisible by } 5$$
$$d_5d_6d_7 \text{ is divisible by } 7$$
$$d_6d_7d_8 \text{ is divisible by } 11$$
$$d_7d_8d_9 \text{ is divisible by } 13$$
$$d_8d_9d_{10} \text{ is divisible by } 17$$

Find the sum of all 0 to N pandigital numbers with this property.

Input Format

Input contains an integer N

Constraints

$3 \leq N \leq 9$

Output Format

Print the answer corresponding to the test case.

Sample Input

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3
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Sample Output

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22212
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