2020（ICPC）江西省大学生程序设计竞赛正式赛题目

1. A Simple Math Problem

Timelimit: 1000MS Memorylimit: 64M

Problem Description:

Huanhuan challenges you to a simple math problem.

Define $F(x)$ as the sum of the decimal digits of x.

For example: $F(123) = 1 + 2 + 3 = 6$, $F(700) = 7 + 0 + 0 = 7$.

Huanhuan wants you to calculate the sum of $F(j)$ for every i, j that satisfy $1 \le j \le i \le n$ and i, j are coprime.

More formally, calculate $\sum_{i=1}^{n} \sum_{j=1}^{i} [gcd(j, i) = 1] F(j)$.

Input requirements:

There are only one test case with a single integer $n (1 \le n \le 10^5)$.

Output requirements:

Print one integer, the answer of $\sum_{i=1}^{n} \sum_{j=1}^{i} [gcd(j, i) = 1] F(j)$.

Sample input:

3

Sample output:

5