Project Euler #159: Digital root sums of factorisations.

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This problem is a programming version of Problem 159 from projecteuler.net

A composite number can be factored many different ways.
For instance, not including multiplication by one, 24 can be factored in 7 distinct ways:

$$24 = 2 \times 2 \times 2 \times 3$$
$$24 = 2 \times 3 \times 4$$
$$24 = 2 \times 2 \times 6$$
$$24 = 4 \times 6$$
$$24 = 3 \times 8$$
$$24 = 2 \times 12$$
$$24 = 24$$

Recall that the digital root of a number, in base 10, is found by adding together the digits of that number, and repeating that process until a number is arrived at that is less than 10.
Thus the digital root of 467 is 8.

We shall call a Digital Root Sum (DRS) the sum of the digital roots of the individual factors of our number.

The chart below demonstrates all of the DRS values for 24.

Factorisation	Digital Root Sum
2x2x2x3	9
2x3x4	9
2x2x6	10
4x6	10
3x8	11
2x12	5
24	6

The maximum Digital Root Sum of 24 is 11.

The function $mdrs(n)$ gives the maximum Digital Root Sum of n. So $mdrs(24) = 11$.

Find $\sum_{i=2}^{n} mdrs(i)$.

Input Format

First line of each file contains an integer T which is the number of testcases.
T lines follow, each containing one integer n.

Constraints

- $1 \leqslant T \leqslant 10^5$
- $3 \leqslant n \leqslant 10^7$

Output Format

Output T lines, one for each testcase.

Sample Input

```
1
10
```

Sample Output

```
51
```

Explanation

$mdrs(2) = 2$
$mdrs(3) = 3$
$mdrs(4) = 4$
$mdrs(5) = 5$
$mdrs(6) = 6$
$mdrs(7) = 7$
$mdrs(8) = 8$
$mdrs(9) = 9$
$mdrs(10) = 2 + 5 = 7$