ASTU ICPC Club
Prob:Primes

Mustefa and Abenezer like to encrypt data. They have a simple encryption scheme. Given a number (which represents an 8-bit character), they encode it by replacing the number with the n^{th} prime sum. The n^{th} prime sum is the sum of all the prime numbers ≤ the n^{th} (0-indexed) prime number. The first 8 n^{th} prime sums are shown below.

N	0	1	2	3	4	5	6	7	..
n^{th} Prime Number	2	3	5	7	11	13	17	19	..
n^{th}Prime Sum	2	5	10	17	28	41	58	77	..

Input

The first line contains an integer T ($1 \leq T \leq 100$), T being the number of test cases. In the next T lines, each line contains an integer n ($0 \leq n \leq 255$).

Output

For each integer n, output the special code.

Sample Input

```
3
0
5
7
```

Sample Output

```
2
41
77
```