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Coding Arena

<**C∗de**Vita/>
the TCS Coding Contest

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Problem : Concatenating primes

If you like numbers, you may have been fascinated by prime numbers. Sometimes we obtain by concatenating two primes. For example, concatenating 2 and 3, we obtain the prime 23. The aim is to find all such distinct "concatenated primes" that could be obtained by concatenating primes ≤ a given integer N.

Input Format:

Integer N

Output Format:

M, the number of distinct primes that could be obtained by concatenating two primes ≤ N

Constraints:

N ≤ 70

Example 1

Input
10

Output
4

Explanations
The primes ≤ 10 are 2, 3, 5, 7. These can be used to form the following concatenated numbers: 22, 23, 25, 27, 32, 33, 35, 37, 52, 53, 55, 57, 72, 73, 75, 77. Of these, there are four primes: 23 37 53 and 73. Hence the output is 4.

Example 2

Input
20

Output
17

Explanation
The prime numbers up to 20 are 2 3 5 7 11 13 17 and 19.

Concatenating these two at a time in all possible ways, we get the following numbers:

22 23 25 27 211 213 217 219
32 33 35 37 311 313 317 319
52 53 55 57 511 513 517 519
72 73 75 77 711 713 717 719
112 113 115 117 1111 1113 1117 1119
132 133 135 137 1311 1313 1317 1319
172 173 175 177 1711 1713 1717 1719
192 193 195 197 1911 1913 1917 1919

We have the following 17 primes numbers in this list: 23 37 53 73 113 137 173 193 197 211 311 313 317 719 1117 1319 1913 Hence the output would be 17.

Note:

Please do not use package and namespace in your code. For object oriented languages your code should be written in one class.

Note:

Participants submitting solutions in C language should not use functions from <conio.h> / <process.h> as these files do not exist in gcc

Note:

For C and C++, return type of main() function should be int.