

Problem statement[Send feedback](#)

You are given an integer ' n '.

Function '**sumOfDivisors(n)**' is defined as the sum of all divisors of ' n '.

Find the sum of '**sumOfDivisors(i)**' for all ' i ' from 1 to ' n '.

Example:

Input: ' n ' = 5

Output: 21

Explanation:

We need to find the sum of '**sumOfDivisors(i)**' for all ' i ' from 1 to 5.

'sumOfDivisors(1)' = 1

'sumOfDivisors(2)' = 2 + 1 = 3

'sumOfDivisors(3)' = 3 + 1 = 4

'sumOfDivisors(4)' = 4 + 2 + 1 = 7

'sumOfDivisors(5)' = 5 + 1 = 6

Therefore our answer is sumOfDivisors(1) + sumOfDivisors(2) + sumOfDivisors(3) + sumOfDivisors(4) + sumOfDivisors(5) = 1 + 3 + 4 + 7 + 6 = 21.

Detailed explanation (Input/output format, Notes, Images)**Sample Input 1:**

3

Sample Output 1:

8

Explanation of sample output 1:

We need to find sumOfDivisors(1) + sumOfDivisors(2) + sumOfDivisors(3).

sumOfDivisors(1) = 1

sumOfDivisors(2) = 2 + 1 = 3

sumOfDivisors(3) = 3 + 1 = 4

Therefore, the answer is sumOfDivisors(1) + sumOfDivisors(2) + sumOfDivisors(3) = 1 + 3 + 4 = 8.

Sample Input 2:

10

Sample Output 2:

87

Expected Time Complexity:

Try to solve this in $O(\sqrt{n})$.

Constraints:

$1 \leq n \leq 3 \times 10^4$

Time Limit: 1 sec