Yet Another Mathematical Problem

Calculate the number of ordered triples of positive integers (*a*, *b*, *c*) such that their multiple *abc* is not larger than a given integer **N** (1 <= **N** <= 10^{11}).

Input

Each test case contains a single line - **N**. Input terminates by EOF.

Output

For each test case output its case number (starting from 1) and the answer in a single line.

Example

Input:
1
3
6
10
15
21
28

Output:
Case 1: 1
Case 2: 7
Case 3: 25
Case 4: 53
Case 5: 95
Case 6: 161
Case 7: 246