Coins Required

Problem Description

Find minimum number of coins required to form any value between 1 to N, both inclusive. Cumulative value of coins should not exceed N. Coin denominations are 1 Rupee, 2 Rupee and 5 Rupee. Let's understand the problem using the following example. Consider value of N is 13, then the minimum number of coins required to formulate any value between 1 and 13, is 6. One 5 Rupee, three 2 Rupee and two 1 Rupee coins are required to realize any value between 1 and 13. Hence this is the answer. However, if one takes two 5 Rupee coins, one 2 rupee coin and two 1 rupee coin, then too all values between 1 and 13 are achieved. But since the cumulative value of all coins equals 14, i.e., exceeds 13, this is not the answer.

Constraints

0 < n < 100000

Input Format

A single integer value.

Output

Four space separated integer values.

1st – Total number of coins.

2nd - number of 5 Rupee coins.

3rd – number of 2 Rupee coins.

4th – number of 1 Rupee coins.

Explanation

Example 1

Input

13

Output

6 1 3 2

Explanation

The minimum number of coins required is 6 with in it:

minimum number of 5 Rupee coins = 1

minimum number of 2 Rupee coins = 3

minimum number of 1 Rupee coins = 2

Using these coins, we can form any value with in the given value and itself, like below:

Here the given value is 13

For 1 = one 1 Rupee coin

For 2 = one 2 Rupee coin

For 3 = one 1 Rupee coin and one 2 Rupee coins

For 4 = two 2 Rupee coins

For 5 = one 5 Rupee coin

For 6 = one 5 Rupee and one 1 Rupee coins

For 7 = one 5 Rupee and one 2 Rupee coins

For 8 = one 5 Rupee, one 2 Rupee and one 1 Rupee coins

For 9 = one 5 Rupee and two 2 Rupee coins

For 10 = one 5 Rupee, two 2 Rupee and one 1 Rupee coins

For 11 = one 5 Rupee, two 2 Rupee and two 1 Rupee coins

For 12 = one 5 Rupee, three 2 Rupee and one 1 Rupee coins

For 13 = one 5 Rupee, three 2 Rupee and two 1 Rupee coins