Problem statement

Ninja is bored with his previous game of numbers, so now he is playing with divisors.

He is given 'N' numbers, and his task is to return the sum of all numbers which is divisible by 2 or 3.

Let the number given to him be - 1, 2, 3, 5, 6. As 2, 3, and 6 is divisible by either 2 or 3 we return 2 + 3 + 6 = 11.

Detailed explanation ( Input/output format, Notes, Images )

Constraints:

1 <= T <= 10

1 <= N <= 10^3

0 <= input[i] <= 10^3

Where ‘T’ denotes the number of test cases and ‘N’ is the elements given to Ninja and input[i] denotes theith input.

Sample Input 1 :

2

3

1 2 3

4

5 6 9 8

Sample Output 1 :

5

23

Explanation for Sample Input 1 :

In the first test case, 1 is neither divisible by 2 or 3. 2 is divisible by 2, and 3 is divisible by 3. So here we return the sum of 2 + 3 which is equal to 5.

In the second test case, 5 is divisible by neither 5 nor 6.6 is divisible by 2, 9 is divisible by 3, and 8 is divisible by 2. So here we return 6 + 9 + 8 = 23.

Problem2

Problem statement

Ninja is given an integer ‘N’. Ninja wants to find whether the binary representation of integer ‘N’ is palindrome or not.

A palindrome is a sequence of characters that reads the same backward as forward.

Ninja is busy with his training. Help Ninja in finding out whether the binary representation of ‘N’ is palindrome or not.

Detailed explanation ( Input/output format, Notes, Images )

Constraints:

1 <= ‘T’ <= 100

1 <= ‘N’ <= 10^18

Time Limit : 1 sec

Sample Input 1:

2

7 // 111

10 // 1010 0101

Sample Output 1:

true

Problem-3

Write a program that , given an integer N , sums all the whole numbers from 1 through N(both inclusive) . Do not include in your sum any of the intermediate values ( 1 and N inclusive) that are divisible by 5 or 7.

Test Input - 10

Expected output – 33

Problem-4

Given a string s , little Johny defined the beauty of the string as the sum of the beauty of the letters in it. The beauty of each letter is an integer between 1 to 26, inclusive , and no two letters have the same beauty. Johny does not care about whether the letters are uppercase or lowercase , so that does not affect the beauty of letter.

Test input - ABbCcc

Expected output – 152

Problem statement

You are given a positive integer N. Your task is to return a list of integers containing integers from 1 to N (both inclusive) in lexicographically ascending order.

For example:- Given 3 numbers 1, 3 and 10, the lexicographical ascending order will be 1, 10 and 3.

Detailed explanation ( Input/output format, Notes, Images )

Constraints:

1 <= N <=10^6

Time Limit: 1 sec

Sample Input 1:

15

Sample Output 1:

1 10 11 12 13 14 15 2 3 4 5 6 7 8 9

Sample Input 2:

24

Sample Output 2:

1 10 11 12 13 14 15 16 17 18 19 2 20 21 22 23 24 3 4 5 6 7 8 9

Problem statement

Given a number 'N', you need to find all possible unique ways to represent this number as the sum of positive integers.

Note

1. By unique it is meant that no other composition can be expressed as a permutation of the generated composition. For eg. [1, 2, 1] and [1, 1, 2] are not unique.

2. You need to print all combinations in non-decreasing order for eg. [1, 2, 1] or [1, 1, 2] will be printed as [1, 1, 2], however, the order of printing all the sequences can be random.

Detailed explanation ( Input/output format, Notes, Images )

Sample Input 1:

4

Sample Output 1:

4

1 1 1 1

1 1 2

2 2

1 3

Explanation For Sample Input 1:

Here notice that all combinations are sorted in non-decreasing order and [1, 1, 2] and [1, 2, 1] are the same and printed as [1, 1, 2].

Note: 1 1 1 1

2 2

4

1 3

1 1 2 is also a valid output as the order of different sequences doesn’t matter.

Sample Input 2:

1

Sample Output 2:

1