Read carefully before you attempt: Solve the questions below and write a working program for each. Use any programming language but avoid using 3rd party libraries that directly solve part of the problem.

1. By filing the blanks with +, -, *, / and following the operator precedence, you can get different results.
   For example,
   This formula: 3 _ 2 _ 1
   Can have values like
   1 = 3 – 2 * 1
   2 = 3 – 2 + 1
   4 = 3 + 2 – 1
   5 = 3 + 2 / 1 Etc.
   Please write a function to enumerate all valid results created by filling blanks in this formula: 4 _ 3 _ 2 _ 1 and 1 _ 2 _ 3 _ 4

2. Given an array of size N-1 such that it only contains distinct integers in the range of 1 to N. Find the missing element.
   Example:
   Input: N = 5
   A[4] = {1,2,4,5}
   Output: 3
   Expected Time Complexity: O(N)
   Expected Auxiliary Space: O(1)
   Constraints:
   $1 \leq N \leq 106$
   $1 \leq A[i] \leq 106$

3. There can be zero or more ways to split a given number into perfect squares greater than 1. Please write a code that enumerates all such sets and print them for any given N. How many solutions does 255 have?
   For example:
   11 has no solution
   13 has one 2*2+3*3
   42 has 3: (2, 2, 2, 2, 2, 2, 3, 3) (2, 2, 3, 3, 4) (2, 2, 3, 5)