Program1:

You are given a list of n-1 integers and these integers are in the range of 1 to n. There are no duplicates in list. One of the integers is missing in the list. Write an efficient code to find the missing integer. Take input from STDIN and display output to STDOUT without any additional text.

Example:
Input:
[1, 2, 7, 6, 3, 4, 8]
Output:
5

Program2:

You are given a string, and a number k, and string length is greater than or equal to k. Write a c code to find all k length substrings which are palindrome. Take input from command line argument.

Example:
Input:
academy
3
Output:
aca

Test Cases:
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1. VALID INPUT:
a) Only two argument will be given as input.

2. INVALID inputs:
a) No argument
b) One or more than two arguments.
c) String 2nd argument

3. You should generate output as follows:
a) Print to the STDOUT without any additional text.
b) If error print 'ERROR' to the STDOUT without any additional text.

Program3:

Ugly numbers are numbers whose only prime factors are 2, 3 or 5. The sequence 1, 2, 3, 4, 5, 6, 8, 9, 10, 12, 15, … shows the first 11 ugly numbers. By convention, 1 is included.
Given a number n, the task is to find n'th Ugly number. Take input from STDIN and display output to STDOUT without any additional text.

Examples:
Input: n = 7

Output: 8
Input: n = 10
Output: 12

Program4:
Given two sorted arrays, print all elements that are not common of these arrays. Take input from STDIN and display output to STDOUT without any additional text.

Example:
Input:
arr1[] = {1, 3, 4, 5, 7}
arr2[] = {2, 3, 5, 6}

Output: {1, 2, 4, 6, 7}

Program5:
Write a program to count the number of prime numbers formed by removing digits from that number from the back. (Including the number itself) Take input from STDIN and display output to STDOUT without any additional text.

Example: if n=131, 131 is prime no, 13(by removing 1 from last) is also prime, but 1 is not prime, so Output = 2