Distinct Substrings

Given a string, we need to find the total number of its distinct substrings.

Input

T- number of test cases. T<=20;
Each test case consists of one string, whose length is <= 1000

Output

For each test case output one number saying the number of distinct substrings.

Example

Sample Input:
2
CCCCC
ABABA

Sample Output:
5
9

Explanation for the testcase with string ABABA:
len=1 : A,B
len=2 : AB,BA
len=3 : ABA,BAB
len=4 : ABAB,BABA
len=5 : ABABA
Thus, total number of distinct substrings is 9.