Sub-words

You got word. Count number of different consistent sub-words of this given word.

Input

In the 1st line there is word: maximum 1000 characters from 'A' to 'Z'.

Output

Your program shall print 1 value:

Number consistent sub-words of the given word.

Examples

Example 1	Example 2	Example 3
Input	Input	Input
ABAB	OAZ	PPP
Output	Output	Output
7	6	3
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Different consistent sub-words are:	Different consistent sub-words are:	Different consistent sub-words are:
A, AB, ABA, ABAB, B, BA, BAB	O, OA, OAZ, A, AZ, Z	P, PP, PPP