Word Game

Story And Question:

Meric can't bear just standing still while talking on the phone. When she starts talking on the phone that takes hours, she randomly scratch a paper, time to time she write words that passes in the conversation and play with them.
As the time passes she notices, she can produce really interesting words when she applyies some rules to this playings.
We are asking you to find the minimum number of changes to reach the encoded words.
Modification Rules:
In the given word it is allowed to cut a piece in any length from any place in the word and added in the end of the word.

Input Format:

First line contains an integer Q, number of queries.
Next Q subsequent lines contain:
First line contains an integer N, length of the substrings that will be cut.
Second line contains an integer M, length of the word.
Third line contains two words, original word and encoded word.

Constraints:

$1 \leq Q \leq 10$
$2 \leq N \leq 9$
$3 \leq M \leq 20$

Output Format:

For each query output the minimum number of changes to modify original word to encoded word.

Sample Input

1
3
12
ACMHACETTEPE APEHACCMETTE

Sample Output:

3

Explanation:

When changes applied as below encoded word can be produced.