Q2: Rinse. Lather. Repeat. Rinse. Lather. Repeat...

Given a set of $1 \leq n \leq 5$ nested for statement loops, how many times does the innermost BODY execute? In a for statement loop, an integer loop variable is incremented by 1 starting from an initial minimum value until it reaches a terminating maximum value.

Consider the two examples in the table on the right. In example E1, the outer $i$ loop iterates 3 times while the inner $j$ loop iterates 6 times, thus BODY executes 18 times. In example E2, the outer $k$ loop iterates 3 times but the inner $j$ loop iterates a variable number of times. The first time through, the $j$ loop iterates 5 times, then the second time it iterates 4 times, and in the third and final time, it iterates 3 times, for a total of 12 executions of the innermost BODY.

The syntax of the for statement is defined below:

\[
\begin{align*}
\text{stmt} & \ := \ \text{for} \ \var = \ expr \ \text{to} \ expr \ \text{do} \\
\text{expr} & \ := \ \var \ | \ 0 .. 9 \\
\var & \ := \ a .. z
\end{align*}
\]

Your program shall read the declaration of up to 5 nested for statement loops and output how often the innermost BODY executes. You can assume that: all variables are lowercase letters; any numeric expression is a digit in the range 0 .. 9; no loop variable is duplicated in any provided input; any loop variable referenced in an expression is properly defined in an earlier for statement loop (as in example E2); and the input is grammatically correct. As with any for statement loop, if the initial minimum value is already greater than the terminating maximum value, then the for statement loop does not execute.

**Input**

The first line of input will be an integer on a line by itself representing the number of nested for statement loops, $n$; you can assume $1 \leq n \leq 5$. Each of the subsequent $n$ lines of input will contain the declaration of a single for statement. The input will be both syntactically and semantically correct.

**Output**

Your output will contain a single integer on a line by itself representing the number of times the innermost BODY would execute.

<table>
<thead>
<tr>
<th>#</th>
<th>Sample Code With Nested For Statements</th>
<th>Number of times BODY executes</th>
</tr>
</thead>
</table>
| E1 | for $i = 1$ to $3$ do 
for $j = 2$ to $7$ do
BODY
end
end | 18 |
| E2 | for $k = 1$ to $3$ do 
for $j = k$ to $5$ do
BODY
end
end | 12 |

Sample Input and Output

<table>
<thead>
<tr>
<th>Input</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>for $x = 1$ to $9$ do</td>
</tr>
</tbody>
</table>
| 2     | for $y = 2$ to $9$ do
for $z = y$ to $8$ do | 28 |
| 1     | for $i = 9$ to $2$ do | 0 |
| 3     | for $a = 1$ to $9$ do
for $b = a$ to $7$ do
for $c = a$ to $b$ do | 84 |
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