Problem P8  The Tipping Point

You are given a common die sitting on a table in a specific orientation. It sits on the table in front of you with a 1 showing on its top face, a 2 showing on its front face, and a 3 showing on its right face. Because the die is ordinary you should know that the total of the numbers on opposite sides of the die add up to 7. Thus the die has a 4 on its left face, a 5 on its back face, and a 6 hidden on its bottom face resting on the table.

The die can tip over to reveal a new number based upon the direction of tipping. You can tip the die AWAY, TOWARD, LEFT or RIGHT. The table below shows the result of each tip given the initial placement described earlier.

<table>
<thead>
<tr>
<th>AWAY</th>
<th>TOWARD</th>
<th>LEFT</th>
<th>RIGHT</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 on top, 6 in front and 3 on right</td>
<td>5 on top, 1 in front and 3 on right</td>
<td>3 on top, 2 in front and 6 on right</td>
<td>4 on top, 2 in front and 1 on right</td>
</tr>
</tbody>
</table>

Given the initial die configuration and a sequence of tip instructions, you must determine the number that remains on the top face of the die after all tips have been completed.

**Input Format**
Your program will read from standard input an integer on a line by itself. This integer represents the number of tip instructions that are to follow, one per line. Each successive line of input contains a single word in upper case reflecting the type of move, either AWAY, TOWARD, LEFT or RIGHT.

**Output Format**
Your program will write to standard output. Your program should produce a single line of output. The line will contain an integer value 1, 2, 3, 4, 5, or 6 on the line by itself.

**Sample Input and Corresponding Sample Output**

<table>
<thead>
<tr>
<th>Sample Input</th>
<th>Sample Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>AWAY</td>
<td></td>
</tr>
<tr>
<td>AWAY</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>AWAY</td>
<td></td>
</tr>
<tr>
<td>LEFT</td>
<td></td>
</tr>
<tr>
<td>LEFT</td>
<td></td>
</tr>
<tr>
<td>TOWARD</td>
<td></td>
</tr>
<tr>
<td>RIGHT</td>
<td></td>
</tr>
<tr>
<td>TOWARD</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>AWAY</td>
<td></td>
</tr>
<tr>
<td>AWAY</td>
<td></td>
</tr>
<tr>
<td>AWAY</td>
<td></td>
</tr>
<tr>
<td>AWAY</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>LEFT</td>
<td></td>
</tr>
<tr>
<td>TOWARD</td>
<td></td>
</tr>
<tr>
<td>RIGHT</td>
<td></td>
</tr>
</tbody>
</table>
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