2. 解：

|  |  |  |  |
| --- | --- | --- | --- |
| 序号 | 读剩的表达式 | 栈 | 输出 |
| 1 | (a+b)\*(c-d\*e)^f-(g/h+i) |  |  |
| 2 | a+b)\*(c-d\*e)^f-(g/h+i) | ( |  |
| 3 | +b)\*(c-d\*e)^f-(g/h+i) | ( | a |
| 4 | b)\*(c-d\*e)^f-(g/h+i) | (+ | a |
| 5 | )\*(c-d\*e)^f-(g/h+i) | (+ | ab |
| 6 | \*(c-d\*e)^f-(g/h+i) |  | ab+ |
| 7 | (c-d\*e)^f-(g/h+i) | \* | ab+ |
| 8 | c-d\*e)^f-(g/h+i) | \*( | ab+ |
| 9 | -d\*e)^f-(g/h+i) | \*( | ab+c |
| 10 | d\*e)^f-(g/h+i) | \*(- | ab+c |
| 11 | \*e)^f-(g/h+i) | \*(- | ab+cd |
| 12 | e)^f-(g/h+i) | \*(-\* | ab+cd |
| 13 | )^f-(g/h+i) | \*(-\* | ab+cde |
| 14 | ^f-(g/h+i) | \* | ab+cde\*- |
| 15 | f-(g/h+i) | \*^ | ab+cde\*- |
| 16 | -(g/h+i) | \*^ | ab+cde\*-f |
| 17 | (g/h+i) | - | ab+cde\*-f^\* |
| 18 | g/h+i) | -( | ab+cde\*-f^\* |
| 19 | /h+i) | -( | ab+cde\*-f^\*g |
| 20 | h+i) | -(/ | ab+cde\*-f^\*g |
| 21 | +i) | -(/ | ab+cde\*-f^\*gh |
| 22 | i) | -(/+ | ab+cde\*-f^\*gh |
| 23 | ) | -(/+ | ab+cde\*-f^\*ghi |
| 24 |  | - | ab+cde\*-f^\*ghi+/ |
| 25 |  |  | ab+cde\*-f^\*ghi+/- |

4. 答：元素依次进栈退栈后栈内元素的个数为0,1,2,1,2,3,2,1,2,1,0,1,0，故栈的最大容量至少为3。