

```
1 #include <stack>
2 #include <queue>
3 #include <iostream>
4 #include <cmath>
5
6 using namespace std;
7
8 int main(){
9
10     string expression="ab*b*d/e+";
11     int val_a,val_b,val_c,val_d,val_e;
12
13     double aux;
14
15     //SOLUCION EXPRESION 1=134
16     //SOLUCION EXPRESION 2=53
17     //SOLUCION EXPRESION 3=207
18
19     val_a=5;
20     val_b=3;
21     val_c=2;
22     val_d=2;
23     val_e=9;
24
25     stack<double> num;
26
27     for(int i=0;i<expression.size();i++)
28     {
29         switch (expression[i])
30         {
31             case 'a':
32                 num.push(val_a);
33                 break;
34             case 'b':
35                 num.push(val_b);
36                 break;
37             case 'c':
38                 num.push(val_c);
39                 break;
40             case 'd':
41                 num.push(val_d);
42                 break;
43             case 'e':
44                 num.push(val_e);
45                 break;
46             case '+':
47                 aux=num.top();
48                 num.pop();
49                 aux=num.top()+aux;
50                 num.pop();
51                 num.push(aux);
52                 break;
53             case '-':
54                 aux=num.top();
55                 num.pop();
56                 aux=num.top()-aux;
57                 num.pop();
58                 num.push(aux);
59                 break;
60             case '*':
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```
61         aux=num.top();
62         num.pop();
63         aux=num.top()*aux;
64         num.pop();
65         num.push(aux);
66         break;
67     case '/':
68         aux=num.top();
69         num.pop();
70         aux=num.top()/aux;
71         num.pop();
72         num.push(aux);
73         break;
74     case '^':
75         aux=num.top();
76         num.pop();
77         aux=pow(num.top(),aux);
78         num.pop();
79         num.push(aux);
80         break;
81     }
82 }
83 cout << num.top() << endl;
84 }
```