

```

1  /**
2      @file Resolución del problema de las Torres de Hanoi
3  */
4
5
6  #include <iostream>
7  #include <ctime>
8  using namespace std;
9
10
11 void hanoi3(int N,int Orig, int Dest,int Aux, int &mov){
12
13     if (N == 1){
14         cout <<"Disco " << N << " desde " << Orig << " hasta " << Dest << endl;
15         mov++;
16     }else{
17         hanoi3(N-1,Orig,Aux, Dest,mov);
18         cout <<"Disco " << N << " desde " << Orig << " hasta " << Dest << endl;
19         mov++;
20         hanoi3(N-1,Aux, Dest,Orig,mov);
21     }
22 }
23
24 void hanoi4(int N,int Orig, int Dest,int Aux1,int Aux2, int &mov){
25
26     if (N!=0){
27         if (N == 1){
28             cout <<"Disco " << N << " desde " << Orig << " hasta " << Dest << endl;
29             mov++;
30         }else{
31             hanoi4(N-2,Orig,Aux1, Dest,Aux2,mov);
32             cout <<"Disco " << N-1 << " desde " << Orig << " hasta " << Aux2 << endl;
33             cout <<"Disco " << N << " desde " << Orig << " hasta " << Dest << endl;
34             cout <<"Disco " << N-1 << " desde " << Aux2 << " hasta " << Dest << endl;
35             mov+=3;
36             hanoi4(N-2,Aux1, Dest,Orig,Aux2,mov);
37         }
38     }
39 }
40 int main()
41 {
42
43     int M,cont=0;
44     do
45     {
46         cout << "Número de discos: ";
47         cin >> M;
48     } while (M <= 0);
49
50     cout <<"HANOI 3 Postes" << endl;
51     hanoi3(M, 1,3,2, cont);
52     cout << "Movimientos: " << cont << endl;
53
54     cont=0;
55
56     cout <<"HANOI 4 Postes" << endl;
57     hanoi4(M, 1,3,2,4, cont);
58     cout << "Movimientos: " << cont << endl;
59     return 0;
60 }

```