```cpp
1    #include <bits/stdc++.h>
2    using namespace std;
3
4    typedef long long ll;
5
6    ll w,T;
7    ll wt[40];
8    ll A[40][40];
9    int n;
10
11   inline ll knapsack(){
12
13       ll K[n+1][T+1];
14
15       for(int i=0;i<=n;i++){
16           for(int j=0;j<=T;j++){
17               if(i==0 or j==0)
18                   K[i][j] = 0;
19               else if(A[i-1][1] <= j){
20                   K[i][j] = max(A[i-1][0]+K[i-1][j-A[i-1][1]],K[i-1][j]);
21               }
22               else
23                   K[i][j] = K[i-1][j];
24           }
25       }
26       ll total B = 0;
27       ll total w = 0;
28       vector<pair<ll,ll> > V;
29       for(int i=n,j=T;i>0;i--){
30           if(K[i][j]!=K[i-1][j]){
31               V.push back(make pair(wt[i-1],A[i-1][0]));
32               ++total B;
33               j-=A[i-1][1];
34           }
35       }
36       cout << K[n][T] << endl
37            << total B << endl;
38       for(int i=V.size()-1;i>=0;i--)
39           cout << V[i].first << " " << V[i].second << endl;
40   }
41   main(){
42       bool f = true;
43       while(cin >> T >> w){
44           if(!f)
45               cout << endl;
46           cin >> n;
47           for(int i=0;i<n;i++){
48               cin >> A[i][1] >> A[i][0];
49               wt[i] = A[i][1];
50               A[i][1] = (2*w*A[i][1]) + (w*A[i][1]);
51           }
52           knapsack();
53           f = false;
54       }
55
56
57   }
58
```