#include<bits/stdc++.h>

using namespace std;

int c[100][100];

int main()

{

int n;

cin>>n;

int i,j,WS;

int w[100],b[100];

for(i=1;i<=n;i++)

{

cin>>w[i];

cin>>b[i];

}

cin>>WS;

memset(c,sizeof(c),0);

for(i=1;i<=n;i++)

{

for(j=1;j<=WS;j++)

{

if(w[i]<=j)

{

if(c[i-1][j-w[i]]+b[i]>c[i-1][j])

c[i][j]=c[i-1][j-w[i]]+b[i];

else

c[i][j]=c[i-1][j];

}

else

c[i][j]=c[i-1][j];

}

}

cout<<"Benefit: "<<c[n][WS]<<endl;

i=n;

j=WS;

while(i>0 && j>0)

{

if(c[i][j]==c[i-1][j])

i--;

else

{

cout<<w[i]<<" ";

i--;

j-w[i];

}

}

return 0;

}