package knapsack;

import java.util.\*;

class Knapsack

{

int n;

int w[],b[],tw;

int c[][];

Knapsack(int w[],int b[],int tw, int n)

{

this.w = w;

this.b = b;

this.tw = tw;

this.n = n;

c = new int [n+1][tw+1];

}

void benefit()

{

int i,j;

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

{

for(j = 1 ; j<= tw ; 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];

}

}

System.out.println(c[n][tw]);

}

void print()

{

int i = n;

int j = tw;

while(i > 0 && j > 0)

{

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

else

{

System.out.print(w[i]+" ");

i--;

j = j - w[i];

}

}

}

}

public class Main

{

public static void main(String[] args)

{

Scanner sc = new Scanner(System.in);

int n,tw,i;

n = sc.nextInt();

int b[] = new int[n+1];

int w[] = new int[n+1];

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

{

w[i] = sc.nextInt();

b[i] = sc.nextInt();

}

tw = sc.nextInt();

Knapsack knpsk = new Knapsack(w,b,tw,n);

knpsk.benefit();

knpsk.print();

}

}