#include <iostream>

#include<bits/stdc++.h>

#include<vector>

using namespace std;

int countSubsetSum(int set[],int n, int sum){

int subset[n+1][sum+1];

for(int i=0;i<=n;i++){

subset[i][0]=1;

}

for(int i=1;i<=sum;i++){

subset[0][i]=0;

}

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

for(int j=1;j<=sum;j++){

if(set[i-1]>j){

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

}

if(set[i-1]<=j){

subset[i][j]= subset[i-1][j] + subset[i-1][j-set[i-1]] ;

}

}

}

return subset[n][sum];

}

int targetSum(int arr[],int n,int diff){

int sum=0;

for(int i=0;i<n;i++){

sum+=arr[i];

}

int s1 = (diff + sum)/2;

return countSubsetSum(arr,n,s1);

}

int main() {

int arr[] = {1,1,2,3};

int diff=1;

int n = sizeof(arr)/sizeof(arr[0]);

cout << "Number of subset with given difference :"<<targetSum(arr,n,diff);

return 0;

}