Find four elements that sum to a given value

#include<iostream>

using namespace std;

int main()

{

int sum;

int a[10],n;

int num1,num2,num3,num4,flag = 0;

cout<<"Enter the number of elements in the array\n";

cin>>n;

cout<<"Enter the elements of the array\n";

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

cin>>a[i];

cout<<"Enter the sum\n";

cin>>sum;

for(int i = 0;i<n-3,flag == 0;i++)

{

num1 = a[i];

for(int j=i+1;j<n-2,flag == 0;j++)

{

num2 = a[j];

for(int k=j+1;k<n-1,flag == 0;k++)

{

num3 = a[k];

for(int l=k+1;l<n,flag == 0;l++)

{

num4 = a[l];

if(num1+num2+num3+num4 == sum)

{

flag = 1;

cout<<num1<<" "<<num2<<" "<<num3<<" "<<num4<<endl;

}

}

}

}

}

if(flag == 0)

cout<<"No such pairs exist";

return 0;

}