**Subarray with 0 sum**

Submissions: [4103](https://practice.geeksforgeeks.org/problem_submissions.php?pid=2051)  Accuracy:

36.58%

   Difficulty: [Easy](https://practice.geeksforgeeks.org/Easy/0/0/)   Marks: 2

Associated Course(s): [Interview Preparation](https://practice.geeksforgeeks.org/courses/interview-preparation/)

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Given an array **a**[] of **N** positive and negative numbers. Find if there is a subarray (of size at-least one) with 0 sum.

**Input:**  
The first line of input contains an integer T denoting the number of test cases. Then T test cases follow. Each test case contains an integer n denoting the size of the array. The next line contains N space separated integers forming the array.

**Output:**  
Print "**Yes**" ( without quotes) if there exist a subarray of size at least one with sum equal to 0 or else print "**No**" ( without quotes).

**Constraints:**  
1 <= T <= 100  
1 <= N <= 104  
-105 <= a[i] <= 105

**Example:  
Input:**  
2  
5  
4 2 -3 1 6  
5  
4 2 0 1 6  
  
**Output:**  
Yes  
Yes

\*\* For More Input/Output Examples Use ['Expected Output'](https://practice.geeksforgeeks.org/problems/subarray-with-0-sum/0#ExpectOP) option \*\*

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<https://practice.geeksforgeeks.org/problems/subarray-with-0-sum/0#_=_>

using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

namespace ConsoleApp1

{

class Program

{

//static int chessKnightMoves(string cell)

//{

//}

static string ExisteSumaCero(int[] arr)

{

Dictionary<int, bool> hash =

new Dictionary<int, bool>();

int sum = 0;

for (int i = 0; i < arr.Length; i++)

{

sum += arr[i];

if (sum == 0 || hash.ContainsKey(sum))

{

return "Yes";

}

hash[sum] = true;

}

return "No";

}

static void Main(string[] args)

{

//int[] arr = { 4, 2, -3, 1, 6 };

//int[] arr = { 4,4,4,4,44,4,4,4,4,44, };

//Console.WriteLine(ExisteSumaCero(arr));

int t = int.Parse(Console.ReadLine());

while(t-- > 0)

{

int n = int.Parse(Console.ReadLine());

int[] arr = Array.ConvertAll(Console.ReadLine().Trim().Split(' '), e => int.Parse(e));

Console.WriteLine(ExisteSumaCero(arr));

}

Console.ReadLine();

}

}

}