

Sum of Three Values

Try to solve the Sum of Three Values problem.

We'll cover the following ^

- Statement
- Examples
- Understand the problem
- Figure it out!
- Try it yourself

Statement

Given an array of integers, `nums`, and an integer value, `target`, determine if there are any three integers in `nums` whose sum is equal to the `target`, that is, `nums[i] + nums[j] + nums[k] == target`. Return `TRUE` if three such integers exist in the array. Otherwise, return `FALSE`.

Note: A valid triplet consists of elements with *distinct* indexes. This means, for the triplet `nums[i]`, `nums[j]`, and `nums[k]`, $i \neq j$, $i \neq k$ and $j \neq k$.

Constraints:

- $3 \leq \text{nums.length} \leq 1000$
- $-10^3 \leq \text{nums}[i] \leq 10^3$
- $-10^3 \leq \text{target} \leq 10^3$

Examples

Sample example 1

Input

target	20
--------	----

nums	3	7	1	2	8	4	5
------	---	---	---	---	---	---	---

Output

result	True
--------	------

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Understand the problem

Let's take a moment to make sure you've correctly understood the problem. The quiz below helps you check if you're solving the correct problem:

Sum of Three Values

1

What should be the output if the following set of inputs is provided?

nums = [2, 3, 1]

target = 6

A) True

B) False

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Question 1 of 4
0 attempted

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Reset Quiz ↻

Figure it out!

We have a game for you to play. Rearrange the logical building blocks to develop a clearer understanding of how to solve this problem.

 Drag and drop the cards to rearrange them in the correct sequence.

Sort the input array in ascending order.

Iterate over the entire sorted array to find the triplet whose sum is equal to the target.

In each iteration, make a triplet by storing the current array element and the other two elements using two pointers (**low** and **high**), and calculate their sum.

Adjust the calculated sum value, until it becomes equal to the target value, by

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conditionally moving the pointers, **low** and **high**.

Return TRUE if the required sum is found. Otherwise, return FALSE.

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Show Solution

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Try it yourself

Implement your solution in **SumOfThree.java** in the following coding playground. We have provided a useful code template in the other file that you may build on to solve this problem.

Java

SumOfThree.java
TwoPointers.java

```
1 import java.util.*;
2
3 public class SumOfThree{
4     public static boolean findSumOfThree(int[] nums, int target) {
5         int low,high,sumOfThreeValue;
6         Arrays.sort(nums);
7
8         for(int i=0; i < nums.length - 2 ; i++){
9             low= i+1;
10            high= nums.length -1;
11
12
13            if(sumOfThreeValue==target){
14                return true;
15            }
16            else if(sumOfThreeValue < target){
17                low++;
18            }
19
20            else{
21                high--;
22            }
23        }
24    }
25
26    return false;
27 }
28
```

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Test Cases

Results

Case 1Case 2Case 3

Input #1

[1,-1,0]

Input #2

-1

Sum of Three Values

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Solution: Valid Palindr...

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Solution: Sum of Thre...

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