



Hello, 2024101067.

# Can Add Up?

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## Problem Statement

Suppose you are given a binary search tree with integer values. Your task is to determine whether there exists a pair of nodes in the tree whose values sum to a given target value.

Write a function that takes the root of a binary search tree and a target integer as inputs and returns a boolean indicating whether there exists a pair of nodes in the tree whose values sum to the target.

You are supposed to construct the binary search tree. The elements in the binary search tree are given in the level order traversal format.

## Input

The input consists of two lines:

- The first line contains a positive integer  $n$  which denotes the number of nodes in the binary search tree.
- The second line contains all the elements of the binary search tree in the level order traversal format. (The elements are space separated.)
- The third line contains an integer  $k$  (target value).

## Output

A bit: 1 for true (there exists a pair of elements in the BST whose sum is the target value( $k$ )) and 0 for false

## Constraints

- $0 < n \leq 200000$
- Each element  $x$  in the binary search tree is an integer with the range  $-10^9 \leq x \leq 10^9$
- $-10^9 \leq k \leq 10^9$

## Sample Testcases





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## Output

0

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## Explanation

We are supposed to find a pair of values (not a **single** value whose sum is  $k$ )

## Input Example 2

```
6
15 86 37 28 54 51
88
```

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## Output

1

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## Explanation

We have the level order format of the tree. We find that  $88 = 37 + 51$  i.e. the *3rd* and *6th* element of the input sequence add up to 88.

## ? Clarifications

[Request clarification](#)

No clarifications have been made at this time.