# Project Estimates

View Try Insights

Skills: Problem Solving (Basic)

Recommended Time: 19 mins Points: 50 10 test cases (5 samples)

Coding Binary Search EASY Data Structures Algorithms Arrays Problem Solving Theme: Finance

A number of bids are received for a project. Determine the number of distinct pairs of project costs where their absolute difference is some target value. Two pairs are distinct if they differ in at least one value.

**Example**

*n = 3*

*projectCosts = [1, 3, 5]*

*target= 2*

There are *2* pairs *[1,3], [3,5]* with the target difference *target = 2*. Therefore, *2* is returned.

**Function Description**

Complete the function *countPairs* in the editor below.

*countPairs* has the following parameter(s):

*int projectCosts[n]:* array of integers

*int target:* the target difference

### Return

*int:* the number of distinct pairs in *projectCosts* with an absolute difference of *target*

### Constraints

- $5 \leq n \leq 10^5$
- $0 < projectCosts[i] \leq 2 \times 10^9$
- Each *projectCosts[i]* is distinct, i.e. unique within *projectCosts*
- $1 \leq target \leq 10^9$

## ▶ Input Format for Custom Testing

## ▼ Sample Case 0

### Sample Input 0

```
STDIN       Function
-----       --------
5       →   projectCosts[] size n = 5
1       →   projectCosts = [1, 5, 3, 4, 2]
5
3
4
2
2       →   target = 2
```

## ▶ Input Format for Custom Testing

## ▼ Sample Case 0

### Sample Input 0

```
STDIN       Function
-----       --------
5       →   projectCosts[] size n = 5
1       →   projectCosts = [1, 5, 3, 4, 2]
5
3
4
2
2       →   target = 2
```

### Sample Output 0

```
3
```

### Explanation 0

Count the number of pairs in *projectCosts* whose difference is *target = 2*. The following three pairs meet the criterion: *(1, 3)*, *(5, 3)*, and *(4, 2)*.

## ▼ Sample Case 1

### Sample Input 1

```
STDIN           Function
-----           --------
10          →   projectCosts[] size n = 10
363374326   →   projectCosts = [363374326, 364147530, 61825163, 107306571, 128124602,
139946991, 428047635, 491595254, 879792181, 106926279]
364147530
61825163
107306571
128124602
139946991
428047635
491595254
879792181
106926279
1           →   target = 1
```

### Sample Output 1

```
0
```

### Explanation 1

Count the number of pairs in *projectCosts* whose difference is target = *1*. Because no such pair of integers exists, return *0*.

## ▼ Sample Case 2

### Sample Input 2

```
STDIN       Function
-----       --------
6       →   projectCosts[] size n = 6
2       →   projectCosts = [2, 4, 6, 8, 10, 12]
4
6
8
10
12
2       →   target = 2
```

### Sample Output 2

```
5
```

### Explanation 2

Count the number of pairs in *projectCosts* whose difference is *target = 2*. The following five pairs meet the criterion: *(2, 4)*, *(4, 6)*, *(6, 8)*, *(8, 10)*, and *(10, 12)*.