



ALCoding Challenge - Summer 2019

Jul 12, 2019, 11:30 AM EDT - Jul 12, 2019, 02:30 PM EDT

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Schedule Matches

Max. Marks: 60

This problem is no longer available for practice. Apology for any inconvenience!

ALbaba has been given a task to schedule cricket matches for the upcoming tournament.

Given N days (in the form of ALbaba calendar where a day is represented as an integer) D_1, D_2, \dots, D_N , But, ALbaba has a superstition that it will rain on days, if the chosen three days are not three consecutive terms of an arithmetic progression.

Meaning, how many triplets days (P, Q, R) are there such that $1 \leq P < Q < R \leq N$ and $D_Q - D_P = D_R - D_Q$.

So the triplets $(10, 20, 30)$, $(12, 8, 4)$, $(6, 6, 6)$ are valid as they are three consecutive days which have an arithmetic progression. But the triplets $(20, 5, 17)$, $(10, 6, 8)$, $(3, 3, 1)$ are not.

Help ALbaba to find the number of ways he could schedule the matches on the days such that they are in arithmetic progression.

Input:-

First line of the input contains an integer N . Then the following line contains N space separated integers D_1, D_2, \dots, D_N .

Output:-

Output the number of ways to choose a triplet such that they are three consecutive terms of an arithmetic progression.

Note:-

- There are just 3 games he has to schedule.
- All the three games can happen on the same day.

Constraints:-

- $3 \leq N \leq 100000$



- D_i has values between 1 and 30000 (inclusive).

SAMPLE INPUT



```
10
3 5 3 6 3 4 10 4 5 2
```

SAMPLE OUTPUT



```
9
```

Explanation

The followings are all 9 ways to choose the days:-

- 1 : ((P, Q, R)) = (1, 3, 5), ((Dp, Dq, Dr)) = (3, 3, 3)
- 2 : ((P, Q, R)) = (1, 6, 9), ((Dp, Dq, Dr)) = (3, 4, 5)
- 3 : ((P, Q, R)) = (1, 8, 9), ((Dp, Dq, Dr)) = (3, 4, 5)
- 4 : ((P, Q, R)) = (3, 6, 9), ((Dp, Dq, Dr)) = (3, 4, 5)
- 5 : ((P, Q, R)) = (3, 8, 9), ((Dp, Dq, Dr)) = (3, 4, 5)
- 6 : ((P, Q, R)) = (4, 6, 10), ((Dp, Dq, Dr)) = (6, 4, 2)
- 7 : ((P, Q, R)) = (4, 8, 10), ((Dp, Dq, Dr)) = (6, 4, 2)
- 8 : ((P, Q, R)) = (5, 6, 9), ((Dp, Dq, Dr)) = (3, 4, 5)
- 9 : ((P, Q, R)) = (5, 8, 9), ((Dp, Dq, Dr)) = (3, 4, 5)

Time Limit:	2.0 sec(s) for each input file.
Memory Limit:	256 MB
Source Limit:	1024 KB
Marking Scheme:	Marks are awarded if any testcase passes.
Allowed Languages:	C, C++, C++14, Java, Python, Python 3

CODE EDITOR

Enter your code or [Upload your code](#) as file.

Save

C (gcc 5.4.0)



```
1  /*
2  // Sample code to perform I/O:
3  #include <stdio.h>
4
5  int main(){
6      int num;
7      scanf("%d", &num);           // Reading input from STDIN
8      printf("Input number is %d.\n", num);   // Writing output to STDOUT
9  }
10
11 // Warning: Printing unwanted or ill-formatted data to output will cause the test cases to fail
```

```
12 */
13
14 // Write your code here
15
```

9

LIVE EVENTS

1:1

💡 Press Ctrl/Command+Spacebar for autocomplete suggestions (accuracy dependent on connection stability).

☒ Provide custom input

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