Subarray Division

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Two children, Lily and Ron, want to share a chocolate bar. Each of the squares has an integer on it.

Lily decides to share a contiguous segment of the bar selected such that:

- The length of the segment matches Ron's birth month, and,
- The sum of the integers on the squares is equal to his birth day.

Determine how many ways she can divide the chocolate.

Example

$s = [2, 2, 1, 3, 2]$
$d = 4$
$m = 2$

Lily wants to find segments summing to Ron's birth day, $d = 4$ with a length equalling his birth month, $m = 2$. In this case, there are two segments meeting her criteria: $[2, 2]$ and $[1, 3]$.

Function Description

Complete the birthday function in the editor below.

birthday has the following parameter(s):

- int s[n]: the numbers on each of the squares of chocolate
- int d: Ron's birth day
- int m: Ron's birth month

Returns

- int: the number of ways the bar can be divided

Input Format

The first line contains an integer n, the number of squares in the chocolate bar.
The second line contains n space-separated integers $s[i]$, the numbers on the chocolate squares where $0 \leq i < n$.
The third line contains two space-separated integers, d and m, Ron's birth day and his birth month.

Constraints

- $1 \leq n \leq 100$
- $1 \leq s[i] \leq 5$, where $(0 \leq i < n)$
- $1 \leq d \leq 31$
- $1 \leq m \leq 12$

Sample Input 0

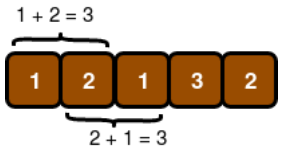
```
5
1 2 1 3 2
3 2
```

Sample Output 0

```
2
```

Explanation 0

Lily wants to give Ron $m = 2$ squares summing to $d = 3$. The following two segments meet the criteria:



Sample Input 1

```
6
1 1 1 1 1 1
3 2
```

Sample Output 1

```
0
```

Explanation 1

Lily only wants to give Ron $m = 2$ consecutive squares of chocolate whose integers sum to $d = 3$. There are no possible pieces satisfying these constraints:

Thus, we print **0** as our answer.

Sample Input 2

```
1
4
4 1
```

Sample Output 2

```
1
```

Explanation 2

Lily only wants to give Ron $m = 1$ square of chocolate with an integer value of $d = 4$. Because the only square of chocolate in the bar satisfies this constraint, we print **1** as our answer.

Change Theme Language Python 3

```
#!/bin/python3

import math
import os
import random
```

```
import random
import re
import sys

#
# Complete the 'birthday' function below.
#
# The function is expected to return an INTEGER.
# The function accepts following parameters:
#  1. INTEGER_ARRAY s
#  2. INTEGER d
#  3. INTEGER m
#

def birthday(s, d, m):
    # Write your code here
    count = 0
    for i in range(len(s) - m + 1):
        if sum(s[i:i + m]) == d:
            count += 1
    return count

if __name__ == '__main__':
    fptr = open(os.environ['OUTPUT_PATH'], 'w')

    n = int(input().strip())

    s = list(map(int, input().rstrip().split()))

    first_multiple_input = input().rstrip().split()
```

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Problem Solving ★★★★

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Next Challenge

Test case 0

Test case 1

Test case 2

Compiler Message

Success

Input (stdin) Download

```
5
1 2 1 3 2
```

Test case 3

3 3 2

Test case 4

Expected Output

Download

1 2

Test case 5