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## Returns

- `int[n]`: the rotated array

## Input Format

The first line contains two space-separated integers that denote  $n$ , the number of integers, and  $d$ , the number of left rotations to perform.

The second line contains  $n$  space-separated integers that describe `arr[]`.

## Constraints

- $1 \leq n \leq 10^5$
- $1 \leq d \leq n$
- $1 \leq a[i] \leq 10^6$

## Sample Input

STDIN	Function
5 4	<code>n = 5 d = 4</code>
1 2 3 4 5	<code>arr = [1, 2, 3, 4, 5]</code>

## Sample Output

```
5 1 2 3 4
```

## Explanation

To perform  $d = 4$  left rotations, the array undergoes the following sequence of changes:

`[1, 2, 3, 4, 5] → [2, 3, 4, 5, 1] → [3, 4, 5, 1, 2] → [4, 5, 1, 2, 3] → [5, 1, 2, 3, 4]`

26

Line: 26 Col: 1

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Run Code

Submit Code

## Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

### ✓ Sample Test case 0

Input (stdin)

Download

```
1 5 4
2 1 2 3 4 5
```

Your Output (stdout)

```
1 5 1 2 3 4
```

Expected Output

Download

```
1 5 1 2 3 4
```

### Sample Input

```
1 1 1 0 0 0
0 1 0 0 0 0
1 1 1 0 0 0
0 0 2 4 4 0
0 0 0 2 0 0
0 0 1 2 4 0
```

### Sample Output

```
19
```

### Explanation

`arr` contains the following hourglasses:

```
1 1 1 1 1 0 1 0 0 0 0 0
1 1 1 1 1 0 1 0 0 0 0 0
1 1 1 1 1 0 1 0 0 0 0 0
0 1 0 1 0 0 0 0 0 0 0 0
1 1 1 1 1 0 1 0 0 0 0 0
0 0 2 0 2 4 2 4 4 4 4 0
1 1 1 1 1 0 1 0 0 0 0 0
0 1 0 1 0 0 0 0 0 0 0 0
0 0 0 0 0 2 0 0 0 2 0 0
0 0 2 0 2 4 2 4 4 4 4 0
0 1 0 1 0 0 0 0 0 0 0 0
0 0 1 0 1 2 1 2 4 2 4 0
```

The hourglass with the maximum sum (19) is:

```
2 4 4
2
1 2 4
```

34

Line: 34 Col: 1

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## Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

✓ Sample Test case 0

✓ Sample Test case 1

✓ Sample Test case 2

Input (stdin)

```
1 1 1 1 0 0 0
2 0 1 0 0 0 0
3 1 1 1 0 0 0
4 0 0 2 4 4 0
5 0 0 0 2 0 0
6 0 0 1 2 4 0
```

Download

Your Output (stdout)

```
1 19
```

Expected Output

```
1 19
```

Download

For example, if the array  $ar = [1, 2, 3]$ ,  $1 + 2 + 3 = 6$ , so return 6.

### Function Description

Complete the `simpleArraySum` function with the following parameter(s):

- `ar[n]`: an array of integers

### Returns

- `int`: the sum of the array elements

### Input Format

The first line contains an integer,  $n$ , denoting the size of the array.

The second line contains  $n$  space-separated integers representing the array's elements.

### Constraints

$$0 < n, ar[i] \leq 1000$$

### Sample Input

STDIN	Function
6	<code>ar[] size n = 6</code>
1 2 3 4 10 11	<code>ar = [1, 2, 3, 4, 10, 11]</code>

### Sample Output

31

### Explanation

Print the sum of the array's elements:  $1 + 2 + 3 + 4 + 10 + 11 = 31$ .

Line: 20 Col: 1

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## Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

### ✓ Sample Test case 0

Input (stdin)

Download

```
1 6
2 1 2 3 4 10 11
```

Your Output (stdout)

```
1 31
```

Expected Output

Download

```
1 31
```

```
STDIN      Function
-----
3          arr[][] sizes n = 3, m = 3
11 2 4     arr = [[11, 2, 4], [4, 5, 6], [10, 8, -12]]
4 5 6
10 8 -12
```

### Sample Output

15

### Explanation

The primary diagonal is:

```
11
 5
 -12
```

Sum across the primary diagonal:  $11 + 5 - 12 = 4$ .

The secondary diagonal is:

```
 4
 5
10
```

Sum across the secondary diagonal:  $4 + 5 + 10 = 19$

Difference:  $|4 - 19| = 15$

**Note:**  $|x|$  is the [absolute value](#) of  $x$ .

```
22         secondary += arr[i][j];
23     }
24 }
25 }
26
27 cout << abs(primary - secondary) << endl;
```

Line: 31 Col: 1

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Run Code

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## Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

### Sample Test case 0

Input (stdin)

```
1 3
2 11 2 4
3 4 5 6
4 10 8 -12
```

Download

Your Output (stdout)

```
1 15
```

Expected Output

Download

```

1 2
2 1

```

### Sample Output 0

```

2

```

### Explanation 0

The distance between points  $(1, 2)$  and  $(2, 1)$  is  $\rho(1, 2) + \rho(2, 1) = 2$ .

### Sample Input 1

```

7 3
1 2
2 3
3 4
4 5
5 6
6 7
3 6
4 5
5 5

```

### Sample Output 1

```

3

```

### Explanation 1

The best points are  $(3, 6)$  and  $(5, 5)$ , which gives us a distance of  $\rho(3, 5) + \rho(6, 5) = 2 + 1 = 3$ .

97

Line: 97 Col: 1

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## Congratulations!

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### ✓ Sample Test case 0

Input (stdin)

[Download](#)

### ✓ Sample Test case 1

```

1 2 2
2 1 2
3 1 2
4 2 1

```

Your Output (stdout)

```

1 2

```

Expected Output

```

1 2

```

[Download](#)

## Return

- *long*: the sum of the array elements

## Input Format

The first line of the input consists of an integer  $n$ .

The next line contains  $n$  space-separated integers contained in the array.

## Output Format

Return the integer sum of the elements in the array.

## Constraints

$$1 \leq n \leq 10$$

$$0 \leq ar[i] \leq 10^{10}$$

## Sample Input

STDIN	Function
5	arr[] size n = 5
1000000001 1000000002 1000000003 1000000004 1000000005	arr[.]

## Output

5000000015

## Note:

The range of the 32-bit integer is

$(-2^{31})$  to  $(2^{31} - 1)$  or  $[-2147483648, 2147483647]$ .

When we add several integer values, the resulting sum might exceed the above range. You might need to use long int C/C++/Java to store such sums.

Line: 20 Col: 1

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## Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

### ✓ Sample Test case 0

Input (stdin)

[Download](#)

```
1 5
2 1000000001 1000000002 1000000003 1000000004 1000000005
```

Your Output (stdout)

```
1 5000000015
```

Expected Output

[Download](#)

```
1 5000000015
```



An array is a data structure that stores elements of the same type in a contiguous block of memory. In an array,  $A$ , of size  $N$ , each memory location has some unique index,  $i$  (where  $0 \leq i < N$ ), that can be referenced as  $A[i]$  or  $A_i$ .

Your task is to reverse an array of integers.

**Note:** If you've already solved our C++ domain's Arrays Introduction challenge, you may want to skip this.

### Example

$A = [1, 2, 3]$

Return  $[3, 2, 1]$ .

### Function Description

Complete the function `reverseArray` with the following parameter(s):

- `int A[n]`: the array to reverse

### Returns

- `int[n]`: the reversed array

### Input Format

The first line contains an integer,  $N$ , the number of integers in  $A$ .

The second line contains  $N$  space-separated integers that make up  $A$ .

### Constraints

- $1 \leq N \leq 10^3$
- $1 \leq A[i] \leq 10^4$ , where  $A[i]$  is the  $i^{th}$  integer in  $A$

### Sample Input 1

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Line: 25 Col: 1



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10/30

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Next Challenge

✓ Test case 0

✓ Test case 1

✓ Test case 2

✓ Test case 3

Compiler Message

Success

Hidden Test Case

Unlock this testcase for 5 hacks.



the number of queries.

Each of the next  $q$  lines contains three space-separated integers  $a$ ,  $b$  and  $k$ , the left index, right index and number to add.

### Constraints

- $3 \leq n \leq 10^7$
- $1 \leq m \leq 2 \cdot 10^5$
- $1 \leq a \leq b \leq n$
- $0 \leq k \leq 10^9$

### Sample Input

STDIN	Function
5 3	arr[] size n = 5, queries[] size q = 3
1 2 100	queries = [[1, 2, 100], [2, 5, 100], [3, 4, 100]]
2 5 100	
3 4 100	

### Sample Output

200

### Explanation

After the first update the list is 100 100 0 0 0.

After the second update list is 100 200 100 100 100.

After the third update list is 100 200 200 200 100.

The maximum value is 200.

36

Line: 35 Col: 1

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## Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

### Sample Test case 0

### Sample Test case 1

### Sample Test case 2

Input (stdin)

Download

1 5 3  
2 1 2 100  
3 2 5 100  
4 3 4 100

Your Output (stdout)

1 200

Expected Output

1 200

Download

Sample Input 3

Copy Download

```
13
abcde
sdaklfj
asdjf
na
basdn
sdaklfj
asdjf
na
asdjf
na
basdn
sdaklfj
asdjf
na
basdn
```

```
abcde sdaklfj asdjf na basdn
Array: queries
```

Sample Output 3

```
1
3
4
3
2
```

30

Line: 30 Col: 1

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Run Code

Submit Code

Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

Sample Test case 0

Sample Test case 1

Sample Test case 2

Input (stdin)

```
4
aba
baba
aba
xzxb
3
aba
xzxb
ab
```

Download

Your Output (stdout)

```
2
```

Print the ratios of positive, negative and zero values in the array. Each value should be printed on a separate line with 6 digits after the decimal. The function should not return a value.

### Input Format

The first line contains an integer,  $n$ , the size of the array.

The second line contains  $n$  space-separated integers that describe  $arr[n]$ .

### Constraints

$$0 < n \leq 100$$

$$-100 \leq arr[i] \leq 100$$

### Sample Input

STDIN	Function
6	arr[] size n = 6
-4 3 -9 0 4 1	arr = [-4, 3, -9, 0, 4, 1]

### Sample Output

```
0.500000
0.333333
0.166667
```

### Explanation

There are 3 positive numbers, 2 negative numbers, and 1 zero in the array.

The proportions of occurrence are positive:  $\frac{3}{6} = 0.500000$ , negative:  $\frac{2}{6} = 0.333333$  and zeros:  $\frac{1}{6} = 0.166667$ .

28

Line: 28 Col: 1

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Run Code

Submit Code

## Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

### Sample Test case 0

### Sample Test case 1

Input (stdin)

Download

```
1 6
2 -4 3 -9 0 4 1
```

Your Output (stdout)

```
1 0.500000
2 0.333333
3 0.166667
```

Expected Output

Download

```
1 0.500000
2 0.333333
3 0.166667
```

### Explanation 0

In this example:

- $a = (a[0], a[1], a[2]) = (5, 6, 7)$
- $b = (b[0], b[1], b[2]) = (3, 6, 10)$

Now, let's compare each individual score:

- $a[0] > b[0]$ , so Alice receives 1 point.
- $a[1] = b[1]$ , so nobody receives a point.
- $a[2] < b[2]$ , so Bob receives 1 point.

Alice's comparison score is 1, and Bob's comparison score is 1. Thus, we return the array  $[1, 1]$ .

### Sample Input 1

```
17 28 30
99 16 8
```

### Sample Output 1

```
2 1
```

### Explanation 1

Comparing the 0<sup>th</sup> elements,  $17 < 99$  so Bob receives a point.

Comparing the 1<sup>st</sup> and 2<sup>nd</sup> elements,  $28 > 16$  and  $30 > 8$  so Alice receives two points.

The return array is  $[2, 1]$ .

32

Line: 32 Col: 1

Upload Code as File

☐ Test against custom input

Run Code

Submit Code

## Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

### ✓ Sample Test case 0

Input (stdin)

Download

```
1 5 6 7
2 3 6 10
```

Your Output (stdout)

```
1 1 1
```

Expected Output

```
1 1 1
```

Download

Initial Values:

$n = 2$

$lastAnswer = 0$

$arr[0] = []$

$arr[1] = []$

Query 0: Append 5 to  $arr[(0 \oplus 0) \% 2] = arr[0]$ .

$lastAnswer = 0$

$arr[0] = [5]$

$arr[1] = []$

Query 1: Append 7 to  $arr[(1 \oplus 0) \% 2] = arr[1]$ .

$arr[0] = [5]$

$arr[1] = [7]$

Query 2: Append 3 to  $arr[(0 \oplus 0) \% 2] = arr[0]$ .

$lastAnswer = 0$

$arr[0] = [5, 3]$

$arr[1] = [7]$

Query 3: Assign the value at index 0 of  $arr[(1 \oplus 0) \% 2] = arr[1]$  to

$lastAnswer$ . Store  $lastAnswer$  in your answer array.  $lastAnswer = 7$

$arr[0] = [5, 3]$

$arr[1] = [7]$

Query 4: Assign the value at index 1 of  $arr[(1 \oplus 7) \% 2] = arr[0]$  to

$lastAnswer$ . Store  $lastAnswer$  in your answer array.  $lastAnswer = 3$

$arr[0] = [5, 3]$

$arr[1] = [7]$

Return your answer array [7, 3]. The code stub prints its elements on separate lines.

31

Line: 31 Col: 1

Upload Code as File

☐ Test against custom input

Run Code

Submit Code

## Congratulations!

You have passed the sample test cases. Click the submit button to run your code against all the test cases.

### Sample Test case 0

Input (stdin)

Download

```
1 2 5
2 1 0 5
3 1 1 7
4 1 0 3
5 2 1 0
6 2 1 1
```

Your Output (stdout)

```
1 7
2 3
```

Expected Output

Download