

A Very Big Sum ☆

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We can calculate the sum of the elements in the array by traversing the array once, summing each element as we go. Because this sum can be quite large, we must use a long data type to hold the value of our sum. A signed **32**-bit integer uses the first bit to represent the sign of the number and the remaining **31** bits to represent the magnitude. The range of a 32-bit integer is -2^{31} to $2^{31} - 1$, or $[-2147483648, 2147483647]$. When we add several integer values, the resulting sum might exceed this range. Use long in C/C++ and Java.

Featured Solutions

C

```
long aVeryBigSum(int ar_count, long* ar) {
    long s = 0;
    for (int i = 0; i < ar_count; i++) s = s + ar[i];
    return s;
}
```

Javascript

```
function aVeryBigSum(ar) {
    return ar.reduce((a, b)=>a+b);
}
```

C++

```
long aVeryBigSum(vector<long> ar) {
    long s = 0;
    for (int i = 0; i < ar.size(); i++) s += ar[i];
    return s;
}
```

Python 3

```
def aVeryBigSum(ar):
    return sum(ar)
```

Java

```
import java.util.*;

public class Solution {
    public static void main(String[] args) {
        Scanner in = new Scanner(System.in);
        int numberOfElements = in.nextInt();
        long sumOfNumbers = 0L;

        for (int i = 0; i < numberOfElements; i++) {
            sumOfNumbers += in.nextLong();
        }
        in.close();
        System.out.println(sumOfNumbers);
    }
}
```

Ruby

```
number_of_elements = gets.strip.to_i
array = gets.strip.split(' ').map(&:to_i)
print array.inject(0, :+)
```

Python 2

STATISTICS

Difficulty: **Easy**Time Complexity: **$O(N)$**

Required Knowledge: Long data types

Publish Date: Jun 23 2015

This is a Practice Challenge

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```
n = int(raw_input().strip())
print sum(map(int, raw_input().strip().split(' ')))
```

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