**Find the Median**

<https://www.hackerrank.com/contests/iwd-21-days-of-code-2/challenges/find-the-median/problem>

The median of a list of numbers is essentially its middle element after sorting. The same number of elements occur after it as before. Given a list of numbers with an odd number of elements, find the median?

**Example :**

arr = [5, 3, 1, 2, 4]

The sorted array arr' = [1,2,3,4,5] . The middle element and the median is 3 .

**Function Description :**

Complete the findMedian function in the editor below.

findMedian has the following parameter(s):

int arr[n]: an unsorted array of integers

**Returns**

int: the median of the array

**Input Format :**

The first line contains the integer n , the size of arr.

The second line contains n space-separated integers arr[i].

**Constraints :**

1 <= n <= 1000001

n is odd

**Sample Input 0**

7

0 1 2 4 6 5 3

**Sample Output 0**

3

**Explanation 0**

The sorted arr = [0, 1, 2, 3, 4, 5, 6]. It's middle element is at arr[3] = 3.

**Solution :**

**#include<iostream>**

**using namespace std;**

**#include<vector>**

**#include <cmath>**

**#include <algorithm>**

**int main()**

**{**

**int n, \*arr ;**

**cin>>n;**

**arr = new int[n];**

**for(int i=0; i<n; i++)**

**{**

**cin>>arr[i];**

**}**

**sort(arr, arr+n);**

**if (n%2 == 1)**

**cout<<arr[(n-1)/2]<<endl;**

**else**

**cout<<(arr[n/2 - 1]+arr[n/2])/2<<endl;**

**return 0;**

**}**