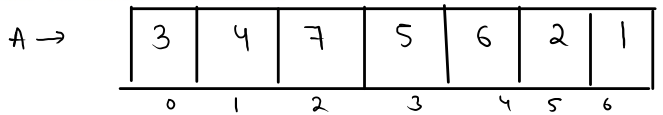
Maximum of Array

Problem | Submissions | Leaderboard | Discussions

For the given array having **N** elements, find the **maximum element** of the array.



i

max = ~~-∞~~ 3

-∞, 3

sum = 0

sum += A[i]

x = x + 0

prod = 1

prod *= A[i]

x = x · 1

max = -∞

x = max(x, -∞)

-∞, x max x, -∞

max = (x, ____ int) = x

max = 0

$-2 \quad -3 \quad -4 \quad -5$

↑

max = $-\infty$ -2

$(2, -\infty)$

max = $-\infty$ // -ve most number.

$\max(x, -\infty) = x$

max = -2147483648

-2147483648 to 2147483647

$x = 72$

$= \max(72,$ -2147483648 $)$

$-2 = \max(-2, \_\_\_\_\_) = -2$

eg.

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

i

```java
import java.io.*;
import java.util.*;

public class Solution {

    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        int n = scn.nextInt();
        int [] A = new int[n];
        for(int i = 0; i < n; i++){
            A[i] = scn.nextInt();
        }
        //process
        int max = Integer.MIN_VALUE;//-2147483648;
        for(int i = 0; i < n; i++){
            max = Math.max(A[i], max);
        }
        System.out.println(max);
    }
}
```

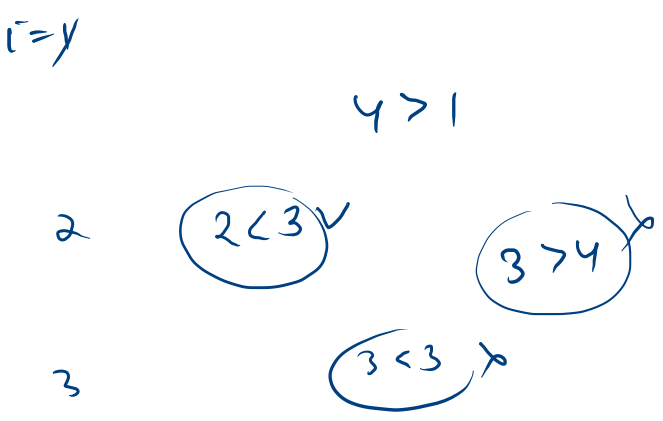
max = -2147483648 ~~8 6 7 7 7~~ 7

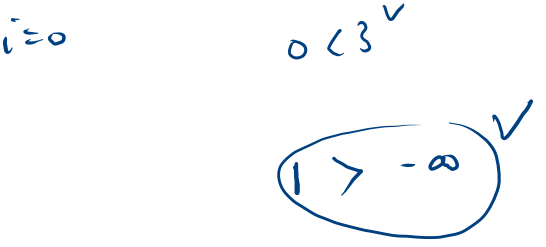
sum = 0 $\quad 0+x = x$

prd = 1 $\quad 1 \cdot x = x$

max = $-\infty$ $\quad -\infty, x = x$

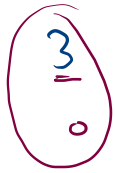
```java
int max = Integer.MIN_VALUE;//-2147483648;
for(int i = 0; i < n; i++){
    // max = Math.max(A[i], max);
    if(A[i] > max){
        max = A[i];
    }
}
System.out.println(max);
```





```java
import java.io.*;
import java.util.*;

public class Solution {

    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        int n = scn.nextInt();
        int [] A = new int[n];
        for(int i = 0; i < n; i++){
            A[i] = scn.nextInt();
        }
        //process
        int max = Integer.MIN_VALUE;//-2147483648;
        for(int i = 0; i < n; i++){
            // max = Math.max(A[i], max);
            if(A[i] > max){
                max = A[i];
            }
        }
        System.out.println(max);
    }
}
```

```java
import java.io.*;
import java.util.*;

public class Solution {

    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        int n = scn.nextInt();
        int [] A = new int[n];
        for(int i = 0; i < n; i++){
            A[i] = scn.nextInt();
        }
        //process
        int max = A[0];
        for(int i = 0; i < n; i++){
            // max = Math.max(A[i], max);
            if(A[i] > max){
                max = A[i];
            }
        }
        System.out.println(max);
    }
}
```



1 4 2

1 2 3.

i

max = 3 (A[0])

4

if (A[i] > max)

{

}

1 > 3

4 > 3

2 > 4

GKSTR35 Count_Even

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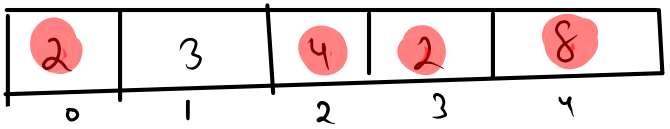
Given an integer **n**, the task is to define an integer array **arr[]** of size **n** &

Print the **Count / Number of even elements in the array**.



ans = 4

A[i] % 2 == 0

even

cont++

Sample Input 0

```
5
2
3
4
2
8
```

Sample Output 0

```
4
```

```java
import java.io.*;
import java.util.*;

public class Solution {

    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        int n = scn.nextInt();
        int [] A = new int[n];
        for(int i = 0 ; i < n; i++){
            A[i] = scn.nextInt();
        }

        int count = 0;
        for(int i = 0 ; i < n; i++){
            if(A[i] % 2 == 0){
                count++;
            }else{ oddcount++
            }
        }
        System.out.println(count);
    }
}
```

n - count

n - count

n = 5

2 3 4 2 8

0 1 2 3 4

count = 0 1 2 3 4

A[i] % 2 == 0

i = 0 0<5

i = 1 1<5 2 % 2 == 0

i = 2 2<5 3 % 2 == 0

i = 3 3<5

i = 4 4<5

5<5

Product of Elements Except Itself

Problem | Submissions | Leaderboard | Discussions

Declare the first array of size **n** that stores values of int data-type. Then take **n** integer inputs and store them in the array one by one.

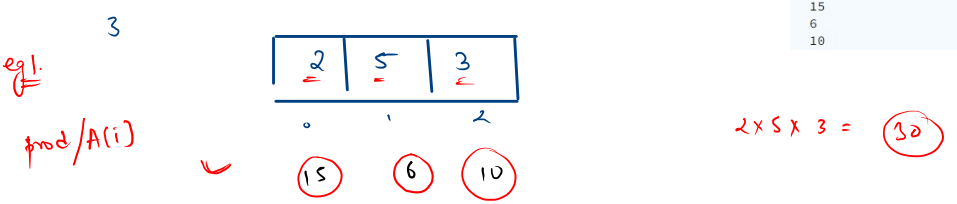
For each index print the **product** of all the elements except the element present at that index..

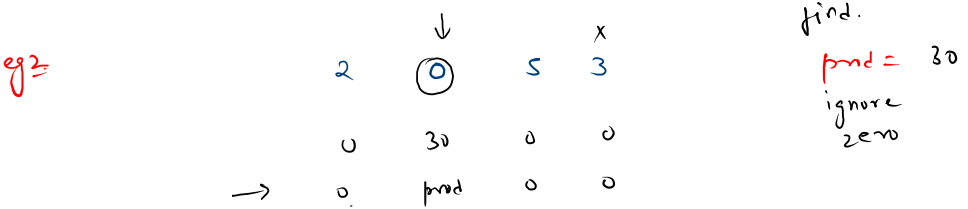
Sample Input 0

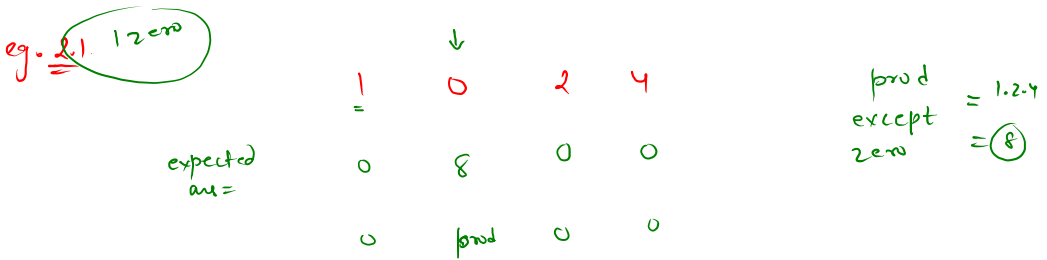
```
3
2
5
3
```

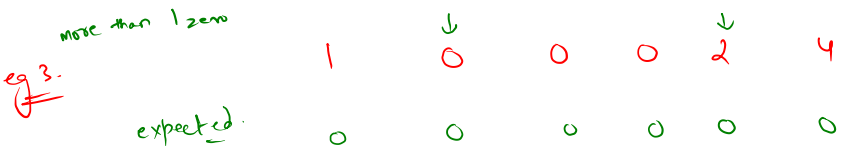
Sample Output 0

```
15
6
10
```





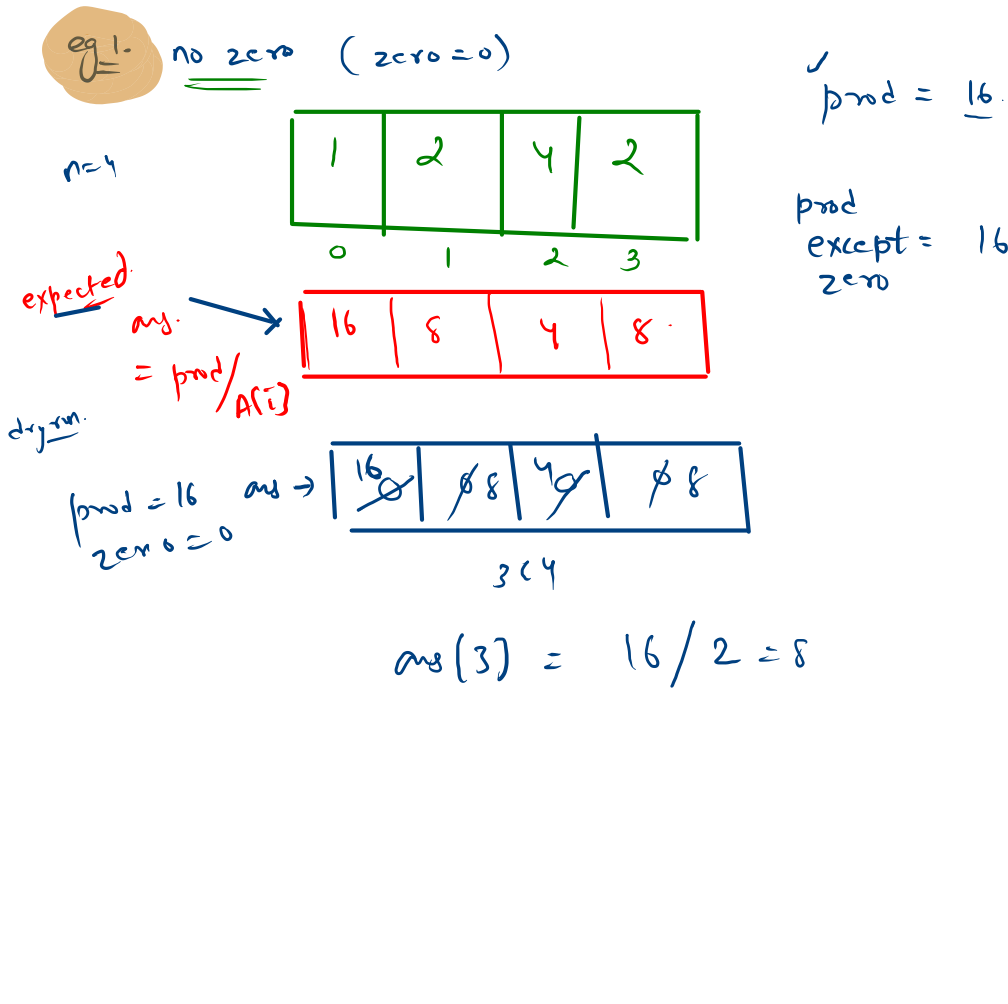




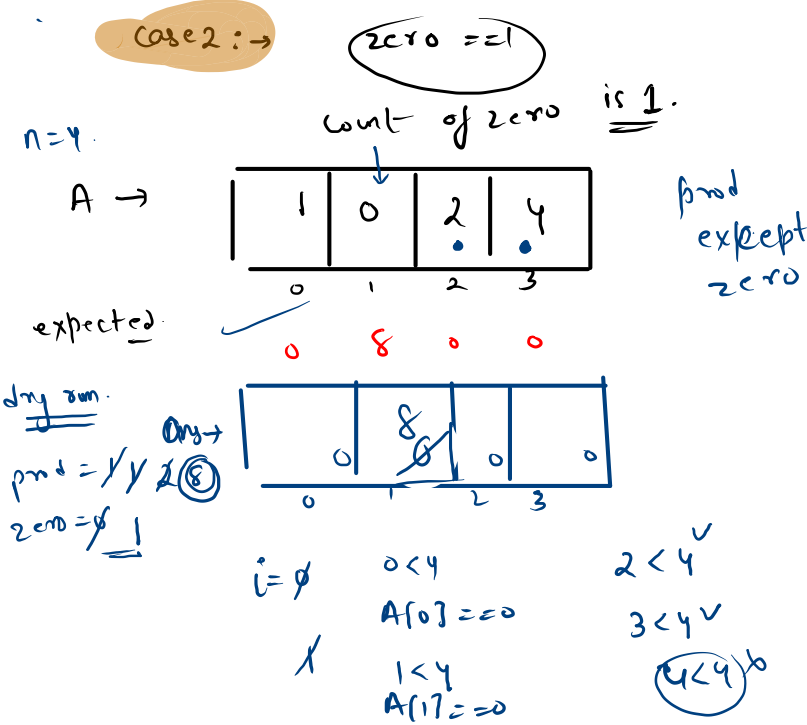
```java
import java.io.*;
import java.util.*;

public class Solution {

    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        int n = scn.nextInt();
        int [] A = new int[n];
        for(int i = 0 ; i < n; i++){
            A[i] = scn.nextInt();
        }
        //logic start
        //ans array
        int [] ans = new int[n];
        int prod = 1;
        int zero = 0;
        for(int i = 0; i < n; i++){
            if(A[i] != 0){
                prod *= A[i];
            }else{
                zero++;
            }
        }
        if(zero == 0){
            for(int i = 0; i < n; i++){
                ans[i] = prod/A[i];
            }
        }else if(zero == 1){
            for(int i = 0; i < n; i++){
                if(A[i] == 0){
                    ans[i] = prod;
                }
            }
        }
        //print
        for(int i = 0; i < n; i++){
            System.out.println(ans[i]);
        }
```



```java
        //ans array
        int [] ans = new int[n];
        int prod = 1;
        int zero = 0;
        for(int i = 0; i < n; i++){
            if(A[i] != 0){
                prod *= A[i];
            }else{
                zero++;
            }
        }
        if(zero == 0){
            for(int i = 0; i < n; i++){
                ans[i] = prod/A[i];
            }
        }else if(zero == 1){
            for(int i = 0; i < n; i++){
                if(A[i] == 0){
                    ans[i] = prod;
                }
            }
        }
        //print
        for(int i = 0; i < n; i++){
            System.out.println(ans[i]);
        }
    }
```



Case3:- more than 1 zero.

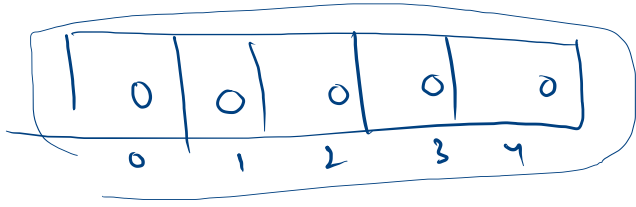
```
        int [] ans = new int[n];
        int prod = 1;
        int zero = 0;
        for(int i = 0; i < n; i++){
            if(A[i] != 0){
                prod *= A[i];
            }else{
                zero++;
            }
        }
        if(zero == 0){
            for(int i = 0; i < n; i++){
                ans[i] = prod/A[i];
            }
        }else if(zero == 1){
            for(int i = 0; i < n; i++){
                if(A[i] == 0){
                    ans[i] = prod;
                }
            }
        }
        //print
        for(int i = 0; i < n; i++){
            System.out.println(ans[i]);
        }
    }
```

n = 5

A → 1 0 0 2 4

0 1 2 3 4

expected - 0 0 0 0 0



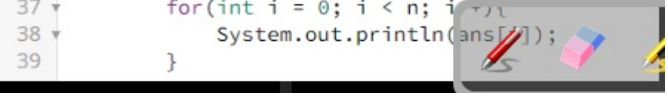
prod = 8

zero = 2

```java
import java.util.*;

public class Solution {

    public static void main(String[] args) {
        Scanner scn = new Scanner(System.in);
        int n = scn.nextInt();
        int [] A = new int[n];
        for(int i = 0 ; i < n; i++){
            A[i] = scn.nextInt();
        }
        //logic start
        //ans array
        int [] ans = new int[n];
        int prod = 1;
        int zero = 0;
        for(int i = 0; i < n; i++){
            if(A[i] != 0){
                prod *= A[i];
            }else{
                zero++;
            }
        }
        if(zero == 0){
            for(int i = 0; i < n; i++){
                ans[i] = prod/A[i];
            }
        }else if(zero == 1){
            for(int i = 0; i < n; i++){
                if(A[i] == 0){
                    ans[i] = prod;
                }
            }
        }
        //print
        for(int i = 0; i < n; i++){
            System.out.println(ans[i]);
        }
```



Case 1 : zero == 0

Case 2 : # zero == 1

Case 3 : zero > 1

Check Characterstic

Problem | Submissions | Leaderboard | D

For each index,

Store 1 at that index if the element at that index is greater than zero.

Store 0 at the index if the element at that index is equal to zero.

Store -1 at the index if the element at that index is less than zero.

In the end print the complete array one by one.

Sample Input 0

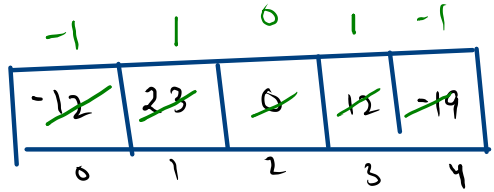
```
5
-12 23 0 12 -19
```

N = 5

Sample Output 0

```
-1 1 0 1 -1
```

?



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        Scanner scn = new Scanner(System.in);
        int n = scn.nextInt();
        int [] A = new int[n];
        for(int i = 0 ; i < n; i++){
            A[i] = scn.nextInt();
        }
        //logic
        for(int i = 0 ; i < n; i++){
            if(A[i] > 0){
                A[i] = 1;
            }else if(A[i] < 0){
                A[i] = -1;
            }
        }

        //output
        for(int i = 0 ; i < n; i++){
            System.out.print(A[i] + " ");
        }

    }
}
```