

HW_Third Maximum

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~~7~~ ~~9~~ ~~6~~ ↓ 10 5
 7 9 6 10 5

$$\rightarrow m_1 = -\cancel{214} \cancel{7} \cancel{9} 10$$

$$\rightarrow m_2 = -\cancel{214} -\cancel{214} \cancel{7} 9$$

$$\rightarrow m_3 = -\cancel{214} -\cancel{214} -\cancel{214} 67$$

→ 7

-2147....

m_1
 11
 2

←

$$m_1 = -\cancel{214} \cancel{1} 2$$

$$m_2 = -\cancel{214} -\cancel{214} 1$$

$$m_3 = -\cancel{214} -\cancel{214} -\cancel{214}$$

1 1 2

$$m_1 = 1$$

$$m_2 = -214$$

$$m_3 = -214$$

m3 - 214

n = 1 ✓

arr = [100000] ✓

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

public class Solution {

    public static void main(String[] args) {

        Scanner sc = new Scanner(System.in);
        int n = sc.nextInt();
        int arr[] = new int[n];

        for(int i = 0; i < n; i++)
        {
            arr[i] = sc.nextInt();
        }

        int m1 = Integer.MIN_VALUE;
        int m2 = Integer.MIN_VALUE;
        int m3 = Integer.MIN_VALUE;

        for(int i = 0; i < n; i++)
        {
            if(arr[i] == m1 || arr[i] == m2 || arr[i] == m3)
                continue;
            if(arr[i] > m1){
                m3 = m2;
                m2 = m1;
                m1 = arr[i];
            }
            else if(arr[i] > m2){
                m3 = m2;
                m2 = arr[i];
            }
            else if(arr[i] > m3){
                m3 = arr[i];
            }
        }

        if(m3 == Integer.MIN_VALUE){
            System.out.print(m1);
        }
        else{
            System.out.print(m3);
        }
    }
}
```