

<https://course.acciojob.com/idle?question=d3e4cf0d-36e6-4072-8a99-b3ea0447decb>

● EASY

● Max Score: 30 Points

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## Maximum Product of Three Elements

You are given an array `arr` of length `n`. You have to print the maximum product of any three elements present in the array.

### Input Format

Input consists of two lines.

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

The next line contains `n` space separated integers denoting the elements of the array `arr`.

### Output Format

The only line of output contains the maximum product of three elements in the array.

### Example 1

Input

```
4
1 3 5 7
```

Output

105

Explanation

We have the array: [1 3 5 7]. The maximum product you can obtain is 105 i.e. by multiplying 3, 5 and 7. Hence the output should be 105.

## Example 2

Input

7  
-2 -5 2 1 -5 2 5

Output

125

Explanation

You can obtain 125 by multiplying -5, -5 and 5. Hence the maximum product is 125.

## Constraints

$3 \leq n \leq 10^6$

$-10^9 \leq \text{arr}[i] \leq 10^9$

### Topic Tags

- Arrays

# My code

```
// n java
import java.util.*;
import java.lang.*;
import java.io.*;

public class Main
{

    public static void main (String[] args) throws
java.lang.Exception
    {
        //your code here
        Scanner s=new Scanner(System.in);
        int n=s.nextInt();
        int arr[]=new int[n];
        for(int i=0;i<n;i++)
            arr[i]=s.nextInt();
        int a=arr[0];
        int b=arr[1];
        int c=arr[2];
        int min1=arr[0];
        int min2=arr[1];
        for(int i=3;i<n;i++)
        {
            int t=arr[i];
            int temp=0;
            if(t>a)
```

```

        {temp=a;a=t;t=temp;}
        if(t>b)
        {temp=b;b=t;t=temp;}
        if(t>c)
        {temp=c;c=t;t=temp;}

        //now for min
        t=arr[i];
        if(t<min1)
            {temp=min1;min1=t;t=temp;}
        if(t<min2)
            {temp=min2;min2=t;t=temp;}
    }
    int ans=a*b*c;
    int ans2=a*min1*min2;
    System.out.print(ans>ans2?ans:ans2);
}
}

```