```java
import java.util.*;

import java.lang.*;

import java.io.*;

Class Day77

{

public static void main (String[] args) throws java.lang.Exception

{

BufferedReader br=new BufferedReader(new InputStreamReader(System.in));

int t=Integer.parseInt(br.readLine());

while(t-->0)

{

int n=Integer.parseInt(br.readLine());

String s=br.readLine();

String sr[]=s.split(" ");int ar[]=new int[n];

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

ar[i]=Integer.parseInt(sr[i]);

Arrays.sort(ar);long cout=Integer.MIN_VALUE;

cout=(long)(ar[n-1]-ar[0])*ar[n-2];

System.out.println(cout);

}

}

}
```