import java.util.\*;  
    public class main {  
    //maxANDindex array is to store the max value and the index of the max value. The Max value is store in 0 index. Index of max stored in 1 index.  
    public static int[] maxValueandIndex(int values[]){  
    int[] maxANDindex = new int[2];  
    maxANDindex[0]= values[0];    
    for(int i =0;i<values.length-1;i++){  
     if(values[i]>maxANDindex[0]){  
     maxANDindex[0]=values[i];  
     maxANDindex[1]=i;  
     }  
       
       
    }  
    return maxANDindex;  
       
    }  
    public static int pickBoxes(ArrayList<Integer> array,int sum,int indexoflastremoved){  
            if(array.size()==0){  
            return sum;  
            }  
    int[] maxANDindex;  
    // to check if this is the first iteration. If it is, just start calculating at 0. If not, start at   
    // index of last removed -1  
    int start;  
    if(indexoflastremoved==-1)  
        start=0;  
    else  
        start=indexoflastremoved-1;  
    //use to store the values of i-1\*i\*i+1. Starts at the   
            int[] values = new int[array.size()];  
            for(int i=start;i<array.size();i++){  
             
                  
                //may be able to optimize but this if statement is simply to avoid a null/exception error or whatever  
                if(array.size()==1)  
                values[0]=array.get(0);  
                //also to avoid null error  
                else if(i==0)  
                    values[0]=array.get(0)\*array.get(i+1);  
                  
                else if( i==array.size()-1)  
                    values[i]=array.get(i)\*array.get(i-1);  
                else{  
                values[i]=array.get(i-1)\*array.get(i)\*array.get(i+1);  
                }  
                  
            }  
            maxANDindex=maxValueandIndex(values);  
            sum+=maxANDindex[0];  
            //when there are only two elements left. Choose to remove the smaller one. The products of i\*i+1 and i+1\*i will be the same.   
            if(array.size()==2){  
            if(array.get(0)>array.get(1))  
            array.remove(1);  
            else  
            array.remove(0);  
            }  
            else{  
            System.out.println("removed "+ array.get(maxANDindex[1]));  
            array.remove(maxANDindex[1]);  
            }  
    return sum=pickBoxes(array,sum,indexoflastremoved);  
        }  
              
              
              
              
              
              
         public static void main(String []args){  
            ArrayList<Integer> A = new ArrayList<Integer>();  
            A.add(8);  
            A.add(2);  
            A.add(3);  
            A.add(6);  
            A.add(7);  
            A.add(9);  
            A.add(4);  
            System.out.println("maxsum " +pickBoxes(A,0,-1));  
            for (Integer p : A)  
                System.out.print(p+" ");  
         }  
    }