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

class Day78 {
    public static void main(String[] args) throws java.lang.Exception {
        MyScanner sc = new MyScanner();
        PrintWriter out = new PrintWriter(new BufferedOutputStream(System.out));
        int tt = sc.nextInt();
        while (tt-- > 0) {
            int n = sc.nextInt();
            int[] a = new int[n];
            TreeSet<Integer> set = new TreeSet<>();
            for (int i = 0; i < n; i++) {
                a[i] = sc.nextInt();
                set.add(a[i]);
            }
            long ans = 0;
            for (int i = 0; i < n; i++) {
                for (int j = i + 2; j < n; j++) {
                    int s = a[i];
                    int e = a[j];
                    int mean = (s + e) / 2;
                    long res = 0;
                    Integer lo = set.lower(mean);
                    if (lo != null) {
                        res = Math.max(res, multiply(e - lo, lo - s));
                    }
                    Integer hi = set.higher(mean);
                    if (hi != null) {
                        res = Math.max(res, multiply(e - hi, hi - s));
                    }
```

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            if (set.contains(mean)) {
                res = Math.max(res, multiply(e - mean, mean - s));
            }
            ans += res;
        }
    }
    out.println(ans);
  }
  out.close();
}

static long multiply(int x, int y) {
  return (long) x * (long) y;
}

public static class MyScanner {
  BufferedReader br;
  StringTokenizer st;

  public MyScanner() {
    br = new BufferedReader(new InputStreamReader(System.in));
  }

  String next() {
    while (st == null || !st.hasMoreElements()) {
      try {
        st = new StringTokenizer(br.readLine());
      } catch (IOException e) {
        e.printStackTrace();
      }
    }
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            return st.nextToken();
        }

        int nextInt() {
            return Integer.parseInt(next());
        }

        long nextLong() {
            return Long.parseLong(next());
        }

        double nextDouble() {
            return Double.parseDouble(next());
        }

        String nextLine() {
            String str = "";
            try {
                str = br.readLine();
            } catch (IOException e) {
                e.printStackTrace();
            }
            return str;
        }
    }
}
```