**Next Leaders**

Each year, the Tennis Club of San Marcos gets ready to pick the president and vice-president of the club. The club decides who will get elected through a simple process: we tally up the number of practices each person has gone to. We then sort the list and pick the largest gap between two people. Those two people will get elected. Do you think you can write a program that automates this process?

**Input:** The first line of input contains **N**, the number of people in the Tennis Club. The second line contain **N** space-separated integers which represent the number of practices each person has gone to.

**Output:** You will output the greatest gap between two players once they’ve been sorted.

**Example Input:**

4

3 6 9 1

**Example Output:**

3

**Explanation:** When you order the list, it becomes (1, 3, 6, 9). There are two solutions. 3 to 6 or 6 to 9. These two solutions have the greatest difference which is 3.