

Make Array Elements Equal

Given an array which contains integer values, we need to make all values of this array equal to some integer value with minimum cost where the cost of changing an array value x to y is $\text{abs}(x-y)$.

Examples :

Input : `arr[] = [1, 100, 101]`

Output : 100

We can change all its values to 100 with minimum cost,

$$|1 - 100| + |100 - 100| + |101 - 100| = 100$$

Input : `arr[] = [4, 6]`

Output : 2

We can change all its values to 5 with minimum cost,

$$|4 - 5| + |5 - 6| = 2$$

Sample Input 1:

```
2
3
1 8 19
4
2 17 26 11
```

Sample Output 1:

```
18
30
```

Explanation:

In test case 1

We can change all element's value to 8 with cost $|1-8| + |19 - 8| = 18$. The value 18 is the minimum cost to make all values in the array equal. Hence, the answer is 18.

In test case 2

We can change all element's value to 11 with cost $|2 - 11| + |17 - 11| + |26 - 11| = 30$. The value 30 is the minimum cost to make all values in the array equal. Hence, the answer is 30.

Sample Input 2:

1

3

1 100 101

Sample Output 2:

100