1521. Find a Value of a Mysterious Function Closest to Target

Description

Winston was given the above mysterious function `func`. He has an integer array `arr` and an integer `target` and he wants to find the values `l` and `r` that make the value `|func(arr, l, r) - target|` minimum possible.

Return *the minimum possible value* of `|func(arr, l, r) - target|`.

Notice that `func` should be called with the values `l` and `r` where `0 <= l, r < arr.length`.

Example 1:

```
Input: arr = [9,12,3,7,15], target = 5
Output: 2
Explanation: Calling func with all the pairs of [l,r] = [[0,0],[1,1],[2,2],[3,3],[4,4],[0,1],[1,2],[2,3],[3,4],[0,2],[1,3],[2,4],[0,3],[1,4],
[0,4]], Winston got the following results [9,12,3,7,15,8,0,3,7,0,0,3,0,0,0]. The value closest to 5 is 7 and 3, thus the minimum difference is 2.
```

Example 2:

```
Input: arr = [1000000,1000000,1000000], target = 1
Output: 999999
Explanation: Winston called the func with all possible values of [l,r] and he always got 1000000, thus the min difference is 999999.
```

Example 3:

```
Input: arr = [1,2,4,8,16], target = 0
Output: 0
```

Constraints:

- `1 <= arr.length <= 10^5`
- `1 <= arr[i] <= 10^6`
- `0 <= target <= 10^7`