

You are given an array of N integers, A_1, A_2, \dots, A_N . Return maximum value of $f(i, j)$ for all $1 \leq i, j \leq N$.

$f(i, j)$ is defined as $|A[i] - A[j]| + |i - j|$, where $|x|$ denotes absolute value of x.

For example,

$A = [1, 3, -1]$

$$f(1, 1) = f(2, 2) = f(3, 3) = 0$$

$$f(1, 2) = f(2, 1) = |1 - 3| + |1 - 2| = 3$$

$$f(1, 3) = f(3, 1) = |1 - (-1)| + |1 - 3| = 4$$

$$f(2, 3) = f(3, 2) = |3 - (-1)| + |2 - 3| = 5$$

So, we return 5.