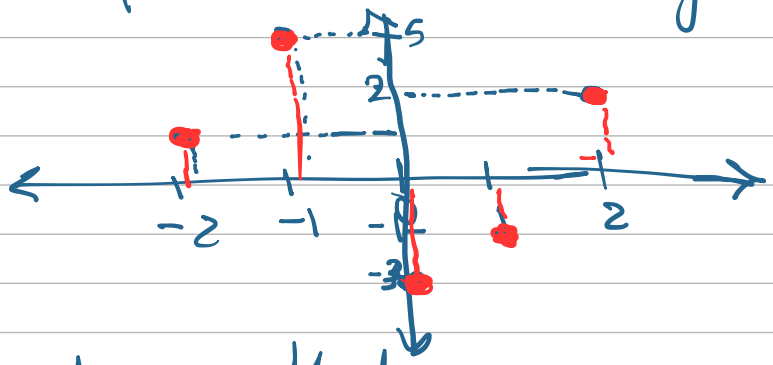
Signal Processing

You will be given array a of n elements (n is odd) representing a signal S centered at $a_{\lceil \frac{n}{2} \rceil}$ ($a_1, a_2 \sim a_n$)

For example if $a = \{1, 5, -3, -1, 2\}$ then it represents this signal



Ahmad claims that you can write this signal as a sum of an odd signal and an arbitrary signal *

Formally $S = X_o + X_a$, where X_o represents the odd signal and X_a represents any signal

You found this task too easy, so Ahmad challenged you to find an answer such that $l \le x_i \le r$ for all $1 \le i \le n$ for X_a

If you can find such answer - print yes then X_a and X_o else output "Impossible"

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* An odd signal is a signal that has index 0 as its center and $X_i = -X_{-i}$ for all $i \le \lceil \frac{n}{2} \rceil$

$1 \le n \le 2 \times 10^5$, $-10^3 \le l \le r \le 10^3$

$-10^3 < a_i < 10^3$

Test Case

5

2 4 5 8 9 ← a

5 10 ← l & r

output:

YES

6 5 5 7 5 ← X_a

-4 -1 0 1 4 ← X_o

Notice $X_{ai} + X_{oi} = a_i$, for all i