# Inversions of PQ and QP

| | |
|---|---|
| Input file: | `standard input` |
| Output file: | `standard output` |
| Time limit: | 2 seconds |
| Memory limit: | 1024 megabytes |

You are given three integers $N, A$ and $B$.

Consider two permutations $P = (P_1, P_2, \ldots, P_N)$ and $Q = (Q_1, Q_2, \ldots, Q_N)$ of $(1, 2, \ldots, N)$ with the following conditions:

- The inversion number of $(P_{Q_1}, P_{Q_2}, \ldots, P_{Q_N})$ equals $A$.
- The inversion number of $(Q_{P_1}, Q_{P_2}, \ldots, Q_{P_N})$ equals $B$.

Determine whether such permutations exist, and if they do, construct one example.

You have $T$ test cases; solve each of them.

### Definition of the inversion number

The inversion number of a sequence $R = (R_1, R_2, \ldots, R_M)$ of length $M$, is the number of pairs of integers $(i, j)$ $(1 \le i < j \le M)$ such that $R_i > R_j$.

## Input

The input is given from Standard Input in the following format:

$T$
$\text{case}_1$
$\vdots$
$\text{case}_T$

Each test case is given in the following format:

$N$ $A$ $B$

- $1 \le T \le 2 \times 10^5$
- $1 \le N \le 2 \times 10^5$
- $0 \le A \le \dfrac{N(N-1)}{2}$
- $0 \le B \le \dfrac{N(N-1)}{2}$
- The sum of $N$ over all test cases does not exceed $2 \times 10^5$.
- All input values are integers.

## Output

Print the answers for $\text{case}_1$, $\text{case}_2$, $\ldots$, $\text{case}_T$ in the following format.

If there exist permutations $P = (P_1, P_2, \ldots, P_N)$ and $Q = (Q_1, Q_2, \ldots, Q_N)$ that satisfy the conditions, output any one of them in the following format:

```
Yes
P_1 P_2 ... P_N
Q_1 Q_2 ... Q_N
```

$$
\begin{array}{l}
\texttt{Yes} \\
P_1\ P_2\ \ldots\ P_N \\
Q_1\ Q_2\ \ldots\ Q_N
\end{array}
$$

If no such permutations exist, output `No`.

## Example

| standard input | standard output |
|---|---|
| 3<br>3 3 1<br>3 1 2<br>8 13 11 | Yes<br>1 3 2<br>2 3 1<br>No<br>Yes<br>2 5 8 4 6 3 7 1<br>2 1 8 5 3 7 4 6 |

## Note

For the output example of the first case, $(P_{Q_1}, P_{Q_2}, P_{Q_3}) = (3, 2, 1)$ and $(Q_{P_1}, Q_{P_2}, Q_{P_3}) = (2, 1, 3)$.