

## Problem B

# It's High Noon

Time limit: 3 seconds

Memory limit: 1024 megabytes

### Problem Description

Mojan is designing a win/lose decision program for a mini-game whose rules are similar to an auto-chess type game. Once the game begins, neither player can make any further adjustments to their characters. The only actions available to both players are to set their characters' speed and attack range before the game starts.

The game rules are as follows:

1. The game is played by two players, referred to as Player A and Player B.
2. Before the game begins, both players stand on a straight line facing each other, with a fixed initial distance of 1000 meters between them in every match.
3. Movement and attack:
  - Each turn, both players simultaneously move forward by their speed distance.
  - After moving, check if the opponent is within the player's attack range.
  - If a player finds the opponent within attack range, they launch an attack immediately, and the match ends.
4. Attack order when both players are in range in the same turn:
  - If both players enter each other's attack range on the same turn, the player with the higher speed attacks first and wins.
  - If both players have the same speed, the match ends in a draw.
  - Note: The attack range difference does not affect who attacks first if both enter range simultaneously; the speed only determines the order.
5. It is possible for both players to pass by each other without either side launching an attack. This situation is considered a draw.
6. The game guarantees that:
  - Players cannot move backward.
  - Players cannot attack backward.

- If the distance between the two players after both have completed their movement in a turn is zero, it is considered within attack range, and either player can launch an attack.

Your task is to write a program that allows Mojan to input the speed and attack range for Player A and Player B, and returns the result of the match.

## Input Format

Your program is to read from standard input. The first line of input contains an integer  $T$ , representing the number of matches for which your program needs to determine the winner.

The next  $T$  lines each contain four integers:  $speed_A$ ,  $attackRange_A$ ,  $speed_B$ ,  $attackRange_B$ , separated by a single space. These represent the speed and attack range of both players in that match.

## Output Format

Output  $T$  lines, each representing the result of one match. If Player A wins that match, output ‘Player A win’. If Player B wins that match, output ‘Player B win’. If the match ends in a draw, output ‘No winner’.

## Technical Specification

- $1 \leq T \leq 100$
- $1 \leq speed_A, speed_B \leq 1,000$
- $1 \leq attackRange_A, attackRange_B \leq 1,000$

### Sample Input 1

```
3
100 300 100 400
950 40 10 1000
50 75 50 99
```

### Sample Output 1

```
Player B win
Player A win
No winner
```