

Take Away Game

Two players play the following game:

- a) A number N is chosen
 - b) players move alternately starting from player1
 - c) On his turn, a player may subtract either 1, 2, 3 .. or M ($M \leq N$) from N .
 - d) The player to make N equal to 0, wins.
 - e) Both play optimally. That is, if there is a move which makes a player win, he is sure to find it.
- Given the starting value N , determine who wins the game.

Input:

First line consists of the number of test cases T ($T \leq 1000$). Each of the next T lines consists of two integers, the numbers N and M ($1 \leq N \leq 2000$).

Output:

You must output T lines. Output "player 1 wins" (without quotes) if the first player wins, else output "player 2 wins"

Example:

input:

2

4 4

2 1

output:

player1 wins

player2 wins