

Annotation:

1. This is a 2013 Bronze problem, very difficult, need strong Java programming basis
2. Do not use an inner/nested class unless you want it to be more encapsulated, because its initiation is complex: `OuterClass.InnerClass innerObject = outerObject.new InnerClass();`
3. wormhole problem has 5 main difficulties:
 - (1). how to create a convenient wormhole class?
My design is to contain axis: `int x, y`; its partner: `wormhole wh`; and boolean `accessed`;
The answer only includes `int x, y`, and its partner: `int`
(mention: it is very important to use `int`, because `int` could be used in array as index)()
 - (2). how to store wormhole's partner?
My plan is use a wormhole partner to represent its pair, null means not pair yet. But actually using `int partner`; and an `point[0]` as an extra space to represent no pair (`wormholes[i] = new point[N + 1]; next_on_right = new int[N + 1];`) is more convenient.
 - (3). how to find `next_on_right` wormhole?
For me, no way. The answer uses a global static `int[] next_on_right`; and then uses two nested for loops to set `next_on_right` wormhole, and a `next_on_right[0]` means no right side wormhole, this is very hard to think out!
 - (4). how to pairing the worms(all possibility) , and how can count the "trap pairings"?
For me, I use recursion to return count, to solve the base case, I use a checked list to see if all the pairing has been down. The answer takes really good use of for loop, like:
`for (i = 1; i <= N && wormholes[i].partner != 0; i++) {}`
If the for loop is quit for some wormhole's partner not found, then pair it with closest next wormhole, then use: `total += pairing();` to recursively solve the problem and includes all the possibilities.

If the for loop is quit for `i > N`, means all partner found, now just need to check using `hasCycle()` to decide return 1 or 0;
 - (5). how to checkHasCycle?
For me, I use a very original way to check by polling each wormhole to see if they have been accessed before. The answer, however, by taking advantage of "int partner", use:
`pos = next_on_right[wormholes[pos].partner];`(wrapped in a for loop) to check. If after quit for loop, `pos != 0`, means there is a cycle.
4. Finally, `Arrays.fill(next_on_right, 0)` is a good way to initiate an array.