**1.5.8** Give a counterexample that shows why this intuitive implementation of union()

for quick-find is not correct:

public void union(int p, int q)

{

if (connected(p, q)) return;

// Rename p’s component to q’s name.

for (int i = 0; i < id.length; i++)

if (id[i] == id[p]) id[i] = id[q];

count--;

}

Answer:

N = 4

Input pairs:

1-0

3-2

0-2

Id ends up with [2 0 2 2] instead of [2 2 2 2]

This is because id[p] has been changed first.