

Second Hint for Problem 82

What you do need to show is that if there are $R(m-1, n) + R(m, n-1)$ people in a room, then there are either m mutual acquaintances or n mutual strangers. As with earlier problems, it helps to start with a person and think about the number of people with whom this person is acquainted or nonacquainted. The generalized pigeonhole principle tells you something about these numbers.