

### Second Hint for Problem 81

Naturally it should come as no surprise that you will use double induction, and you can use either form. As you think about how to use induction, the Pascal relation will come to mind. This suggests that you want to make assumptions involving  $\binom{m+n-3}{m-1}$  people in a room, or  $\binom{m+n-3}{m-2}$  people in a room. Now you have to figure out what these assumptions are and how they help you prove the result! Recall that we have made progress before by choosing one person and asking whether this person is acquainted with at least some number of people or unacquainted with at least some other number of people.