1. (a)
2. (e)
   a. We have to use the inductive hypothesis to show that the inductive step holds, not restate the inductive hypothesis by assuming the inductive step
3. (e)
   a. I'm not even sure who the "last" k students are, but whoever they are, the inductive hypothesis does not say anything about the $(k+1)^{th}$ student
4. (c)
   a. The proof would be that for a set of size k+1 to sum to 0, you'd either have to add a 0, or remove the non-zero element and be forced add another non-zero element to maintain the invariant
5. (e)
   a. Adding an $l \times l$ square to the end of an $ml \times nl$ rectangle does not yield a rectangle, if $m \neq n$.