

**Algorithm Design**  
*M. T. Goodrich and R. Tamassia*  
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**Solution of Exercise C-1.17**

The induction assumes that the set of  $n - 1$  sheep without  $a$  and the set of  $n - 1$  sheep without  $b$  have sheep in common. Clearly this is not true with the case of 2 sheep. If a base case of 2 sheep could be shown, then the induction would be valid.