Induction Template
Dr. Ostheimer; CS 14 and 24

Fill in the theorem you are proving here:

**Theorem 1**

Complete the proof by filling in the question marks below.

*Proof*:

- For $n$ such that ??

  let $P(n)$ be the statement ??

- Basis Step: Prove $P(??)$, i.e. prove that ??

  ???

- Inductive Step:
  - Assume that $P(k)$ holds for all $k < n$, i.e. assume that ??

  - Prove that $P(n)$ holds, i.e. prove that ??

?????? •

(Please indicate where you *used* the inductive assumption.)