Math 2534  The Outline for a PMI Proof.

The Correct write up will include complete sentences and the following outline:

1) Domain is always **the natural numbers** (zero may be included)
2) Statement of the Theorem in *complete sentences*.
3) Verification of base cases (**Elements in the truth set**) Use complete sentences to explain why you are doing the calculations. **Show that for at least one value** a , **P(a) is true**.
4) **Assume true up to** some arbitrary natural number k. (the inductive assumption) **For all natural numbers** a ≤ n ≤ k  **P(n) is true**
5) **State intent to prove** true for the k+1 term. (Be sure to show what the results should look like.)  **IF P(k) is true, then P(k+1) is true.**
6) Body of proof: Justify each step **using sentences to tie work together**.
7) **Statement of conclusion**: Since I have assumed true up to k and proved true for k+1, my hypothesis is true for all natural numbers for n > ??.