The Inductive Hypothesis

The inductive hypothesis must be a statement of the form $P(N)$, where N is arbitrary.
Example of bad inductive hypotheses:

- The inductive hypothesis is that $g(N) > n$ for all N (Bad because you are asserting what you want to prove)
- The inductive hypothesis is $N^2 + 3$ (Bad because you need to assert something that is either true or false)
- The inductive hypothesis is that $f(3) = 17$ (Bad because $P(N)$ needs to depend on the parameter N).