Weak Induction vs. Strong Induction

- Weak Induction asserts a property $P(n)$ for one value of n (however arbitrary)
- Strong Induction asserts a property $P(k)$ is true for all values of k starting with a base case n_0 and up to some final value n.
- The same formulation for $P(n)$ is usually good - the difference is whether you assume it is true for just one value of n or an entire range of values.

Sometimes Strong Induction is needed.