Concrete Mathematics (A Foundation For Computer Science)

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Mathematical induction

Mathematical induction is a way to prove some statement about the integer n is true for all $n \geq n_0$. First we prove the statement when n has its smallest value, n_0; this is called the basis. Then we prove the statement for $n > n_0$, assuming that it has already been proved for all values between n_0 and $n - 1$, inclusive; this is called the induction. Such a proof gives infinitely many results with only a finite amount of work.

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