David: I included part III ~~no~~ with ch 11
~~first~~ ~~Intro~~ instead of ch 9 since it takes
material from ch 11

III   Counting

— INSERT A goes here —
(text on pp 751 & 753)

— INSERT D goes here —

We began our study of counting in Chapter 9 with a collection of rules and methods for finding closed-form expressions for sums and products like $\sum_{i=1}^{n} x^i$ and $\prod_{i=1}^{n} i$.

We also introduce asymptotic notation such as $\sim$, O, and Θ which is commonly used in computer science to ~~more~~ more simply express ~~running times~~ a quantity such as the of a program as a the dependence of running time on ~~on a on a~~ function of a parameter of the input.

In Chapter 10, ~~we~~ we show how to solve a variety of recurrences that arise in computational problems. These methods are especially useful when you need ~~to bound the~~ to design ~~an~~ or analyze recursive programs.

In Chapters 11, and 12, we ~~cover~~ describe ~~a series of th~~ the most basic rules for ~~count~~ determining the cardinality of a set. This material is simple yet powerful, ~~the material on generating~~ and it provides a great tool ~~functio~~ set for later use in your future career.

We conclude in Chapter 13 with a brief

digression into the final frontier of counting — infinity. We'll define what it means for a set to be countable, and show you some examples of sets that are ~~so big~~, ~~you~~ really big — bigger ~~can't easily~~ ~~they are bigger than these~~ even than the set of real numbers.