Starting to Count

- 1. I have 10 different algebra books, 11 different geometry books, and 12 different calculus books. How many ways can I select one book to read?
- 2. How many different license plates can be formed if there are 6 symbols, the first three being letters, and the last three being numerals (including "unfortunate" three letter words)?
- 3. I have a collection of 10 different books. In how many ways can I place them in some order on my shelf? (Different orderings are counted separately.)
- 4. I have a collection of n different books. In how many ways can I place them in some order on my shelf?
- 5. I have a collection of 10 different books. In how many ways can I select 4 of them and then place them in some order on my shelf? (Different orderings are counted separately.)
- 6. I have a collection of n different books. In how many ways can I select k of them and then place them in some order on my shelf?
- 7. I have a collection of 10 different books. In how many ways can I select 4 of them to toss in my backpack and take with me on vacation?
- 8. I have a collection of n different books. In how many ways can I select k of them to toss in my backpack and take with me on vacation?
- 9. How many different "words" (different sequences of 11 letters) can be formed by permuting the letters in "MISSISSIPPI"?
- 10. How many factors does the number 75600 have?
- 11. Problem 8, page 136.