

Reading: Discrete Mathematics, first edition, section Sections 9.2 Section 9.2: 1, 3, 7, 9, 11, 13, 15, 17
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### Section 9.2

- Determine the number of distinct permutations (with repetition) of the letters of each of the following words.
  - LEVEL
  - BABBLE
  - TEETER
  - REWIND
  - HIAWATHA
  - MISSISSIPPI
- How many 7-digit numbers can be formed from the digits in the following numbers? (a) 4,116,461. (b) 8,555,858.
- A 10-question multiple choice quiz is known to have 4 questions where the answer is (a), 3 questions where the answer is (b), and 3 questions where the answer is (c). How many possible assortments of answers are there?
- Seven young boys have moved into a new community and would like to participate in little league baseball. Three teams, namely the Falcons, the Jaguars, and the Panthers, agree to take the 7 new players, with the Falcons taking 3 and the other teams taking 2 each. In how many ways can this be done?
- The Chair of a University Department is making committee assignments for the coming year. There are 8 faculty members who have not yet received their committee assignments. If there are 4 openings on the Undergraduate Committee and 2 openings each on the Graduate and Personnel Committees, then how many possible committee assignments are there for the 8 faculty members?
- At a buffet dinner, one of the people at a table (seating 6 people) volunteers to go to the dessert table to bring back a dessert for each person at the table. When he arrives at the dessert table, he learns that he has three choices: apple pie, chocolate cake, and ice cream. How many different choices does he have for desserts to select?
- Ten people have been selected to receive gift certificates to a restaurant. Two people will receive \$200 gift certificates, three will receive \$100 gift certificates, and five will receive \$50 gift certificates. In how many ways can these gift certificates be distributed?
- A total of 12 different computer science books are to be given to the top 3 participants in a programming contest. How many ways can the books be distributed if the person finishing first gets 6 books, the person finishing second gets 4 books, and the person finishing third gets 2 books?