

## Homework 8

*Instructor: Sandy Irani*

Covers sections 10.8-10.10

### Written Homework

zyBook Exercises are labeled in the text with an "E" in the title bar. You do not have to copy the questions for any of the written homework in your solutions that you turn in.

- 1) zyBook exercise 10.8.1
- 2) 30 different jobs are distributed to 6 printers.
  - (a) How many ways are there to distribute the jobs if there are no restrictions on the number of jobs that go to each printer?
  - (b) How many ways are there to distribute the jobs if the same number of jobs go to each printer?
- 3) zyBook exercise 10.8.5
- 4) zyBook exercise 10.8.7
- 5) zyBook exercise 10.9.1
- 6) Gertrude goes to the store and buys a dozen candy bars. The store sells four variety of candy bars: Twix, Snickers, Nestle Crunch, and Almond Joy.
  - (a) How many ways are there for Gertrude to select the candy bars?
  - (b) How many ways are there for Gertrude to select the candy bars if she selects at least 3 Twix?
  - (c) How many ways are there for Gertrude to select the candy bars if she selects at most 5 Snickers bars?
  - (d) How many ways are there for Gertrude to select the candy bars if she selects at least 3 Twix and at most 5 Snickers bars?
- 7) A teacher distributes 200 extra credit points to the students in her class of 20 students over the course of a month. Each child gets some number of points and the total number of points given to all the children is 200.
  - (a) How many ways are there for her to distribute the points?
  - (b) How many ways are there for her to distribute the points if each student gets at least five points?
  - (c) How many ways are there for her to distribute the points if each student gets the same number of points?
  - (d) How many ways are there for her to distribute the points if a particular student, Amanda, gets no more than 10 points?
- 8) zyBook exercise 10.9.3

- 9) zyBook exercise 10.9.6
- 10) zyBook exercise 10.10.1
- 11) zyBook exercise 10.10.2
- 12) zyBook exercise 10.10.4

**Challenge Activities (marked with a "C" in the title bar)**

There are no challenge activities with this assignment.