Reading

Brassard & Bratley, Chapters 1, 2, & 3.

Practice

Brassard & Bratley, 1.21, 1.28, 1.30, 2.6, 2.7, 2.8, 2.18, 2.19, 2.25, 3.2, 3.4, 3.9, 3.10, 3.11, 3.14, 3.16, 3.17, 3.22, 3.24.

To Be Handed In

1. Brassard & Bratley, 2.15
2. Brassard & Bratley, 3.3
3. Brassard & Bratley, 3.18
4. Brassard & Bratley, 3.21
5. Consider the following game: An odd number of white balls and any number of black balls are put in a bag. An infinite supply of black balls is available. A step consists of removing two balls from the bag and applying the following rule: If the balls are the same color, they are both thrown away and a new black ball is placed in the bag. If the balls are of different colors, the white one is returned to the bag and the black one is discarded. Show that the game eventually terminates with a single white ball in the bag.

Bonus

An economically-challenged chain-smoking professor finds that he can put together four cigarette butts to make a complete cigarette. If he starts with $n$ cigarette butts, how many complete cigarettes can he smoke?