

1. In the long run, when considering many, many legal disputes, about 90% of them end in a settlement.
2.
 - a. 5; no, because outcomes from 10 successive flips vary due to chance.
 - b. 0.7. No, this is not surprising. Short run behavior is unpredictable, and results vary.
 - c. The proportion of tails would be much closer to 0.5 because after many trials, the proportion of tails would approach the true probability.
3.
 - a. Answers will vary. Possible answer: A randomly selected person has a birthday in the summer.
 - b. Answers will vary. Possible answer: Selecting a card with a 14 on it from a standard deck of cards.
 - c. Answers will vary. Possible answer: Winning in a single game of rock, paper, scissors.
 - d. Answers will vary. Possible answer: Getting a positive result when squaring a non-zero number.
4. Carly is just as likely to sit with her best friend on Wednesday as any other day. Seats are chosen randomly and there is no relationship between the card Carly and her friend choose from one day to the next. Even though it is unlikely that Carly will sit next to her best friend many days in a row, in the short run, streaks are common.
5. Answers will vary. Possible answer: I disagree. Just because there are patterns in the data (3 songs playing in the original sequence of the playlist) does not necessarily mean that the shuffle mode is not random. In truly random processes, patterns and streaks can and do occur by chance. The sequence 7, 8, 9 is just as likely to occur as any other sequence of three numbers, such as 7, 15, 2.
6. A
7. B