

Answers to Odd-Numbered Exercises

1. No. The generated numbers between 2 and 12 would be equally likely, but they are not equally likely with real dice.
3. Yes, it does. Each of the 365 birthdays has the same chance of being selected, and the cards are replaced, so it is possible to select the same birthday more than once.
5. Randomly generate 50 random numbers, with each number between 1 and 100. Consider the numbers 1 through 95 to be adults who recognize the brand name of McDonald's, while the numbers 96 through 100 represent adults who do not recognize McDonald's.
7. Randomly generate a number between 1 and 1000. Consider an outcome of 1 through 528 to be a free throw that is made, and consider an outcome of 529 through 1000 to be a free throw that is missed.
9. a. Answer varies.
b. It would be *unlikely* to randomly select 50 consumers and find that about half of them recognize McDonald's.
11. a. Answer varies.
b. It would be *unlikely* for O'Neal to make all of five free throws in a game.
13. The exact answer is 0.5, so an answer from a simulation should be around 0.5. Such runs are not *unlikely*.
15. For the simulation, generate 152 random numbers between 0 and 1 inclusive. Sum the results to find the number of boys. Repeating the simulation should show that a result of 127 boys is *unlikely*, suggesting that the YSORT method is effective.
17. With switching, $P(\text{win}) = 2/3$. With sticking, $P(\text{win}) = 1/3$.
19. No; no

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