## Probability Distribution Based on Empirical Probabilities - Independent Practice Worksheet

Complete all the problems.

George dealt a hand of ten cards from a standard deck of playing cards. The number of possible hands is 15,820,024,220. The number of possible hands consisting entirely of red black cards (spades and clubs) is 5,311,735, and the number of possible hands consisting entirely of spades is 286.
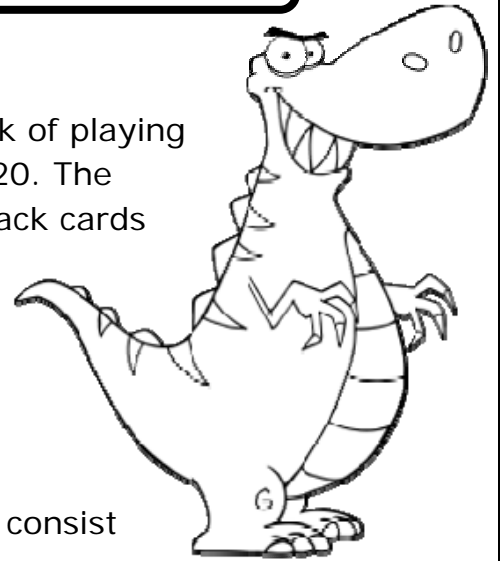
1) The probability of being dealt a hand that does not consist entirely of black cards is approximately:

2) If you are dealt a hand of ten black cards from a standard deck of playing cards, the probability of having a hand consisting entirely of spades is approximately:

David rolls a pair of standard dice. The number of possible outcomes is 36. The number of possible outcomes consisting entirely of [five and six] is 4 and the number of possible outcomes consisting entirely of fives is 1.

3) The probability of being an outcome that does not consist entirely of the number of five is approximately:

4) The probability of being an outcome that consists entirely of the number of five is approximately:

Richard rolls two standard dice. The number of possible outcomes is 36. The number of possible outcomes consisting entirely of [six and three] is 4, and the number of possible outcomes consisting entirely of threes is 1.

5. The probability of being an outcome that does not consist entirely of number of six is approximately:

6. What is the probability of having an outcome consisting entirely of six?

7. Last Sunday, 325 of my 550 customers purchased one or more of my laptops on-line. Thus, the probability that a randomly selected customer purchased a laptop on-line is 325/550 = 0.59. Is this an estimated probability or empirical probability?

8. Last Sunday, 200 of my 400 customers purchased one or more of my on-line bags. Thus, the probability that a randomly selected customer purchased an on-line bags is 200/400 = 0.5. Is this an estimated probability or empirical probability?

9. Last Sunday, 50 of my 70 customers purchased one or more of my on-line Mp3 player. Thus, the probability that a randomly selected customer purchased an on-line Mp3 player is 50/70 = 0.71. Is this an estimated probability or empirical probability?

10. Last Sunday, 240 of my 360 customers purchased one or more of my on-line LED T.V. Thus, the probability that a randomly selected customer purchased an on-line LED T.V. is 240/360 = 0.66. Is this an estimated probability or empirical probability?