

DATA 605 - Discussion 8

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03/22/2018

Section 8.1, Page 312, Exercise 4

Question 4

A 1-dollar bet on craps has an expected winning of $-.0141$. What does the Law of Large Numbers say about your winnings if you make a large number of 1-dollar bets at the craps table? Does it assure you that your losses will be small? Does it assure you that if n is very large you will lose?

Solution

The Law of Large Numbers says that you will lose an average of 0.0141 per game, so if you play a large number of games, your losses will grow. It doesn't say whether you will win or lose a game, but, as n increases, your net will average out to a loss of 0.0141 per game.