

Chuck a Luck

Question: In this gambling game, a player can buy a ticket for \$1 on any number from 1 to 6. Three identical and unfair dice are rolled. If the booked number appears on 0, 1, 2 or 3 dice, player wins \$0, \$1, \$2 or \$3 respectively, without returning the original \$1. What is expected money you can win after buying a ticket for \$1?

Solution: Intuition: Book the full house so that always win \$3 for \$ 6. Thus, the expected money we can win is \$0.5.