EoS - E-tutorial 04 - WiSe 2022/2023

StatRef.E.1.6.00035 (60 Punkte)

Sie haben die folgende Antwort gegeben:

Klaus is currently learning for the upcoming statistics exam. Klaus wonders if he can reproduce the recently learned contents in a simple dice experiment. Therefore, he grabs cup of dice which only contains fair, six-sided dice.

Hint: Please round your results - if necessary and if not asked otherwise - to **four** decimal places.

a) (5 Points) Klaus rolls a single dice once. Please calculate the probability that the number 1 results. 0.1667 ✓

b) (15 Points) Now he adds a second dice to the cup and wants to roll both dice only once. He wonders what the probability of at least one dice showing the number 6 is. Please calculate the respective probability. 0.3056 ✓

c) (25 Points) Please calculate the probability that Klaus rolls in the first roll a smaller or the same number than/as in the second, utilising only one dice. 0.4167 ✗

d) (15 Points) Finally, Klaus throws all 4 dice into the cup. He rolls the whole cup with all dices 4 times. On average, how many times would you expect the number 6 to result? Please calculate the respective expected value. 2.6667 ✓

Die bestmögliche Lösung lautet:

Klaus is currently learning for the upcoming statistics exam. Klaus wonders if he can reproduce the recently learned contents in a simple dice experiment. Therefore, he grabs cup of dice which only contains fair, six-sided dice.

Hint: Please round your results - if necessary and if not asked otherwise - to **four** decimal places.

a) (5 Points) Klaus rolls a single dice once. Please calculate the probability that the number 1 results. 0.166666666666667

b) (15 Points) Now he adds a second dice to the cup and wants to roll both dice only once. He wonders what the probability of at least one dice showing the number 6 is. Please calculate the respective probability. 0.305555555555556

c) (25 Points) Please calculate the probability that Klaus rolls in the first roll a smaller or the same number than/as in the second, utilising only one dice. 0.583333333333333

d) (15 Points) Finally, Klaus throws all 4 dice into the cup. He rolls the whole cup with all dices 4 times. On average, how many times would you expect the number 6 to result? Please calculate the respective expected value. 2.66666666666667

Sie haben 35 von 60 möglichen Punkten erreicht.