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14. Exercise: Discrete probability calculations

Exercises due Feb 5, 2020 05:29 IST Completed

Exercise: Discrete probability calculations

2/2 points (graded)

Consider the same model of two rolls of a tetrahedral die, with all 16 outcomes equally likely. Find the probability of the following events:

a) The value in the first roll is strictly larger than the value in the second roll.

✓ Answer: 0.375

b) The sum of the values obtained in the two rolls is an even number.

✓ Answer: 0.5

Solution:

a) The event of interest is $\{(2, 1), (3, 1), (4, 1), (3, 2), (4, 2), (4, 3)\}$. It consists of 6 elements (outcomes), each of which has probability $1/16$, for an overall probability of $6/16 = 3/8$.

b) The event of interest is $\{(1, 1), (2, 2), (3, 3), (4, 4), (1, 3), (3, 1), (2, 4), (4, 2)\}$. It consists of 8 elements (outcomes), each of which has probability $1/16$, for an overall probability of $8/16 = 1/2$.

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You have used 1 of 3 attempts



 Answers are displayed within the problem

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Another way to think about the first question

1

We don't have to list all the possibilities to get the answer to the first question. The outcome is going to ...



Did you find the answer using mathematical notation or by graphical illustration?

14 new

I find drawing and coloring is much easier in this problem. I know the rules of probability and counting w...



I can't submit my answers

5

Please help me. I can't submit my answers.



Read Carefully- tetrahedral die is a four sided dice

1

I did not care to look what a tetrahedral die was, so I assumed it was a 16 sided die and got wrong the fir...



I don't understand question 2

7

Even after I read "show answer" I don't understand it. Can anyone explain? What is "even number" here...



PSA: Answers don't need to be simplified e.g. $\frac{2}{4}$ is same as $\frac{1}{2}$

3

PSA: Answers don't need to be simplified e.g. $\frac{2}{4}$ is same as $\frac{1}{2}$



Why null or 0 is part the events of number Even .

?

2



answer button will show after three attempts

2

To get the answer button, try looking for it after three attempts.

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