

## Open-Ended Question

**Please respond fully to the open-ended question that follows. Show your work and clearly explain your answer. You will be graded on the correctness of your method as well as the accuracy of your answer and explanation.**

20. A box containing five cards labeled 2, 3, 5, 7, and 8 is placed on your desk. You are asked to draw two cards out. You win if the sum of the cards is even. You lose if the sum of the cards is odd. What is the probability that you will win the game? What is the probability that you will lose the game?

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21. Tara rolls a red die and flips a nickel simultaneously. What is the probability of rolling a prime number on the die and flipping tails on the coin?