Evaluation 3

Evaluation 3 Problem 1

1/1 point (graded)

Suppose you flip a fair coin six times. What is the probability that you'll get four heads and two tails? *Choose the best answer.*

- $\left(\frac{1}{2}\right)^4$
- $\frac{\binom{6}{4}}{64}$ ✔
- $2 \times \frac{\binom{6}{2}}{64}$
- $\frac{4}{6}$

Submit You have used 1 of 2 attempts

Answers are displayed within the problem

Evaluation 3 Problem 2

1/1 point (graded)

Suppose you flip a fair coin seven times. What is the probability you'll get either three heads and four tails, or four heads and three tails? *Choose the best answer.*

- $\frac{3^7+4^7}{2^7}$
- $\frac{7^3+7^4}{2^7}$
- $\frac{\binom{7}{3}+\binom{7}{4}}{2^7}$ ✔
- $\frac{\binom{7}{3}+\binom{7}{4}}{\binom{7}{2}}$

Submit You have used 1 of 2 attempts

Answers are displayed within the problem

Evaluation 3 Problem 3

1/1 point (graded)

Say you flip a coin seven times. What is the probability the number of heads will be even? *Choose the best answer.*

- $\frac{\binom{7}{4}}{2^7}$
- $\frac{\binom{7}{2}}{2^7}$
- $\frac{1}{2}$ ✔

- $\frac{\binom{7}{4}}{\binom{7}{2}}$

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Answers are displayed within the problem

Evaluation 3 Problem 4

1/1 point (graded)

In the game of Phigh, you roll three dice and your score is the highest number showing.

What is the probability of getting a score of "$\mathbf{2}$" or less? *Choose the best answer.*

- $\frac{6^3-4^3}{6^3}$
- $\frac{2^3}{6^3}$ ✔
- $\binom{6}{2} - \binom{8}{5} - \binom{7}{5}$
- $\frac{\binom{6}{2}+\binom{6}{1}}{\binom{6}{3}}$

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Answers are displayed within the problem

Evaluation 3 Problem 5

1/1 point (graded)

In the game of Phigh, you roll three dice and your score is the highest number showing.

You have scored a "4," and now it is your opponent's turn. What is the probability that you'll lose the game? *Choose the best answer.*

- $\frac{5^3+6^3}{6^3}$
- $\frac{2^6}{6^3}$
- $\frac{\binom{6}{4}+\binom{6}{5}}{\binom{6}{3}}$
- $\frac{6^3-4^3}{6^3}$ ✔

Submit You have used 1 of 2 attempts

Answers are displayed within the problem

Evaluation 3 Problem 6

1/1 point (graded)

Suppose you roll four dice. What is the probability that the sum of the numbers showing is "5 " or less? *Choose the best answer.*

- $\frac{5}{6^4}$ ✔
- $\frac{5^4}{6^4}$
- $\frac{2}{6^4}$

- $\frac{2}{\binom{6}{4}}$

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Answers are displayed within the problem

Evaluation 3 Problem 7

1/1 point (graded)

What is the probability of being dealt a full house, aces over kings? In other words, what is the probability of being dealt a five-card poker hand containing three aces and two kings
Choose the best answer.

NOTE: See the Guide to Poker Hands for a summary of terminology.

- $\frac{\binom{4}{3}+\binom{4}{2}}{\binom{52}{5}}$
- $\frac{\binom{4}{3}\times\binom{4}{2}}{\binom{52}{5}}$ ✔
- $\frac{4\times(4\times3)}{\binom{52}{5}}$
- $\frac{(4\times3\times2)\times(4\times3)}{\binom{52}{5}}$

Submit You have used 1 of 2 attempts

Answers are displayed within the problem

Evaluation 3 Problem 8

1/1 point (graded)

In a standard deck of cards, two suits (diamonds and hearts) are red, and the other two (spades and clubs) are black. We'll call a poker hand a "nearsighted flush" if all five cards are of the same color. What is the probability of being dealt a nearsighted flush? *Choose the best answer.*

- $\frac{2\times 26^5}{52^5}$
- $\frac{\binom{26}{5}}{\binom{52}{5}}$
- $\frac{2\times\binom{26}{5}-4\times\binom{13}{5}}{\binom{52}{5}}$
- $\frac{2\times\binom{26}{5}}{\binom{52}{5}}$ ✔

Submit You have used 1 of 2 attempts

Answers are displayed within the problem

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