

Lecture 8: Quiz

Name:

Problem 1

The correct answer in Bertrand's Paradox is:

- a) $1/4$
- b) it depends.
- c) $1/2$
- d) $1/3$

Problem 2

Who produced formalized an axiom system of probability?

- a) Betrand.
- b) Cardano.
- c) Kolmogorov
- d) Euler.

Problem 3

What is the Martingale strategy? a) Chose randomly.

- b) Always bet on black.
- c) Double the bet when losing, quit after first win.
- d) bet on red if 3 times black appeared.

Problem 4

What is an "random variable"?

- a) An element in the laboratory Ω
- b) The probability function which assigns a value to an event.
- c) A subset of the set Ω
- d) A function from the set Ω to the reals.

Problem 5

In how many ways can one permute 10 letters? a) 10.

- b) $10(10 - 1) = 90$
- c) $10! = 3628800$.
- d) $10!/(2!8!) = 45$

Problem 6

In the Dave problem, where one boy is born at night. What was the probability the other was a boy?

- a) $2/3$
- b) $1/2$
- c) $1/3$
- d) $3/7$

Problem 7

The Monty-Hall problem has the following origin:

- a) A lecture hall name, where the question was first raised.
- b) The Monty Python sketch: on how to irritate people.
- c) Monty Hall was the name of a game show host.
- d) Monty is the main character from the movie "With honors".

Problem 8

The expectation of a random variable X is

- a) the event which occurs most often. b) it is the expected distance from the mean.
- c) a real number telling which value is expected.
- d) a random variable guessing the value of X best.

Problem 10

What was a fair entrance fee for the Petersburg paradox, where you get 2^n dollars, if n times head appears.

- a) 10 dollars
- b) 1 dollar
- c) there is no finite fair entrance fee
- d) does not matter, you always lose