Re: Math Midget seeks help with odds

Source: http://sci.tech−archive.net/Archive/sci.math/2006−12/msg04671.html

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- *Date*: Fri, 15 Dec 2006 00:36:23 −0000

"chrystalia" <aprilthebrilliant1@xxxxxxxxxxx> wrote in message news:1165824598.899567.196540@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx

> Greetings:
>
> I am not a math professional, but I am hoping someone will help me. My partner and I are running what could be termed "binary prediction tests", in that we are testing subjects on their ability to predict the outcome of coin tosses (heads or tails) and the colors of unseen playing cards (red or black). The tests are, obviously, designed to determine the presence or absence of so−called psychic abilities (precognition, mainly). We have data sets that obviously show non random affects. The question is, how unlikely are the divergences? For example, we have one subject who has tossed a total of 222 tails (longest streak 23 consecutive tails) and 135 heads in a single series of tosses, and consistently tosses a head/tail ratio of 2:1.

Maybe it is a biassed coin!

If the subject is tossing a 2:1 ration of heads to tails this is nothing to do with them guessing − either the coin is biassed as I say, or the subject is good at obtaining a particular result in flipping a coin. This has nothing to do, in my view, with precognition.

In statistics, a fair coin is one that if it is tossed will randomly will come up head to tails 50:50.

Anything else is said to be biased.

This is not to say that there cannot be runs of heads or tails but in the long−term the ration of heads:tails will be 50:50.

Given that you have a "fair" coin you can then study under experimental conditions the proportion of outcomes (H or T) that an onlooker gets.

Now if the tosser is able to produce a particular result (H or T) then it seems to me that they could collude with the caller of the result to produce

either more or less H's or T's.

Nick

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