Stat 134: Section 6

Adam Lucas

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Problem 1

You flip a fair coin 10 times, and I flip a fair coin 10 times. What's the probability that we get the same number of heads? Write your answer without a summation.

Problem 2: Fisher's Exact Test

Suppose I am interested in determining whether or not taking a drug might cause a harmful side effect in its users. I sample 200 patients, and note whether they took the drug and whether they experienced the side effect. (The results are displayed below). Assuming there is no causal relationship, what is the chance that at least 16 of the 52 patients taking the drug experienced the side effect due to chance/random assortment?

	Side Effect	No Side Effect
Taking Drugs	16	36
Not Taking Drugs	25	123

Problem 3

Draw five cards from a standard deck of cards to form a poker hand.
Let E be the event of having no point. Find P(E).

Instead of subtracting the sum of
probabilities of getting points, try
to think how you can approach this
directly.

Hint: For a poker hand to receive no
point, they have to be all singles, but
not a straight or flush.

Prepared by Brian Thorsen and Yiming Shi