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Puzzled
Coin Flipping

Each of these puzzles involves coin flipping. Simple stuff, right? Not necessarily...though solutions will indeed be provided in next month's column.

1. You have just joined the Coin Flippers of America, and, naturally, the amount of your annual dues will be determined by chance. First you must select a head-tail sequence of length five. A coin is then flipped (by a certified CFA official) until that sequence is achieved with five consecutive flips. Your dues is the total number of flips, in U.S. dollars; for example, if you choose HHHHH as your sequence, and it happens to take 36 flips before you get a run of five heads, your annual CFA dues will be $36. What sequence should you pick? HHHHH? HTHTH? HHHTT? Does it even matter?

2. Now you have entered your first CFA tournament, facing your first opponent. Each of you will pick a different head-tail sequence of length five, and a coin will be flipped repeatedly. Whoever's sequence arises first is the winner. You have the option of choosing first. What sequence should you pick?

3. Following the tournament (which you win), you are offered a side bet. You pay $1 and flip a coin 100 times; if you get exactly 50 heads, you win $20 (minus your dollar). If you lose, you are out only the $1. Even so, should you take the bet?