

Problem 5 (due Monday, April 8)

An investor in a casino is offered a choice of getting a return each time a certain game is played. The game is played by tossing N times a fair coin and recording the sequence of heads (H) and tails (T). Let h be the number of appearances of HH in the recorded sequence and let t be the number of appearances of HT. For example, when $N=5$ and THHHT is recorded then $h=2$ and $t=1$. The investor can choose to either get h cents each time the game is played, or to get t cents each time the game is played. Which choice offers a better expected return?

No solutions were submitted. The expected returns for each choice are actually the same and equal to $(N-1)/4$. For a detailed solution see the following link [Solution](#).

From:

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Permanent link:

<http://www2.math.binghamton.edu/p/pow/problem5s24>

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