

Hints for exercises for Wednesday, second hour

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Straws (McKay, Exercise 15.4) Arithmetic coding gives you one suggestion. You can compare this to a method which achieves complete fairness at the cost of requiring an unbounded number of coin flips.

Arithmetic coding for a bent coin

1. You should get codeword lengths 1, 3, 3, 4.
2. You should get a sum of $13/16$.
3. It's better (i.e., higher).

Spaced-out language Draw a decision tree for choosing the string.

Palindrome machine How can you describe the hidden memory states of the machine? What does the probability distribution over these states look like given the data?