(C) The Heads and Tails of Huffman (1/1)

Frequent letters can be encoded using few coins, while less common letters use more coins. By analyzing the frequency of letters in natural text, Huffman encoding trees can be constructed to encode text as efficiently as theoretically possible (using the fewest coins).

C1. TTTTTTHHTTHTTTHHTHTTTHHTTHHTTHHTTHT Answer: HE FED BEEF

HTHTHHTTTHTTHHTHTTTHHTTHHTHTT Answer: A CAGED BED

C2. Answer: TTTTTTHH[A]THTTTTHHTHTT decodes to HEADED (position 7, 8, or 9, orientation H)

C3. MISSISSIPPI

Answer (not unique):

(H=I

 T=(H=S

    T=(H=P

       T=M)))

TTTHTHTHHTHTHHTTHTTTHH   coin count = 21

ABRACADABRA

Answer:

(H=A

 T=(H=(H=B

       T=C)

    T=(H=D

       T=R)))

HTHHTTTHTHTHTTHHTHHTTTTH   coin count = 23