

K4 Indices by Class (six-track skeleton)

Class 0: 00 06 12 18 24 30 36 42 48 54 60 66 72 78 84 90 96

Class 1: 04 10 16 22 28 34 40 46 52 58 64 70 76 82 88 94

Class 2: 02 08 14 20 26 32 38 44 50 56 62 68 74 80 86 92

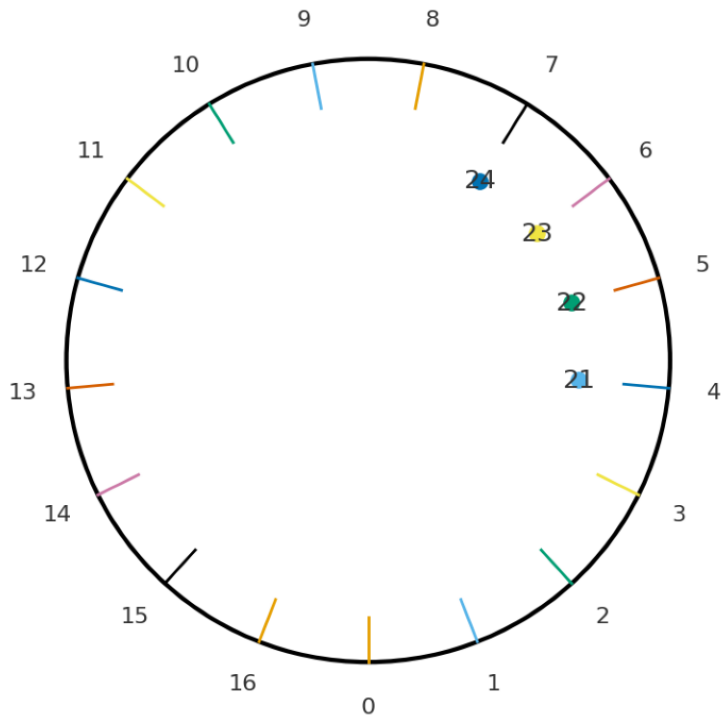
Class 3: 03 09 15 21 27 33 39 45 51 57 63 69 75 81 87 93

Class 4: 01 07 13 19 25 31 37 43 49 55 61 67 73 79 85 91

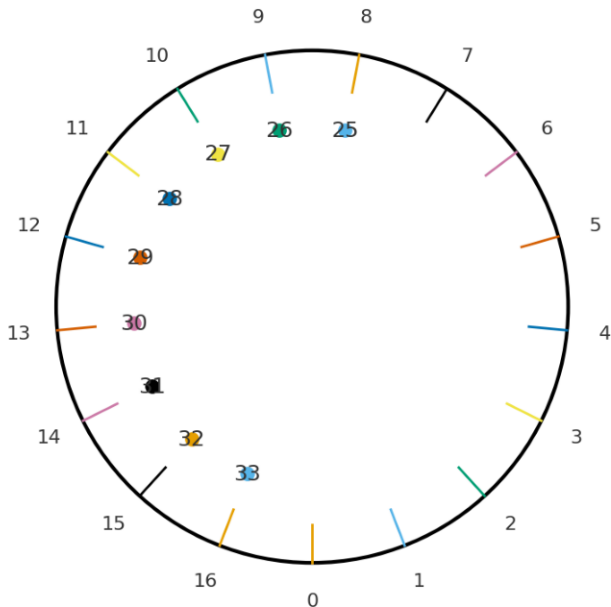
Class 5: 05 11 17 23 29 35 41 47 53 59 65 71 77 83 89 95

Legend: anchors at EAST(21-24), NORTHEAST(25-33), BERLIN(63-68), CLOCK(69-73);
tail indices 75-96.

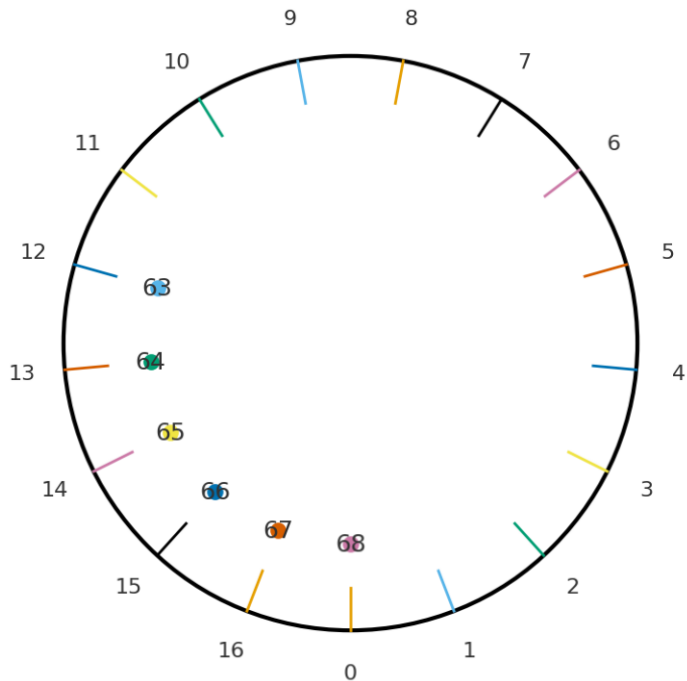
Anchor 'EAST': slots for indices 21-24



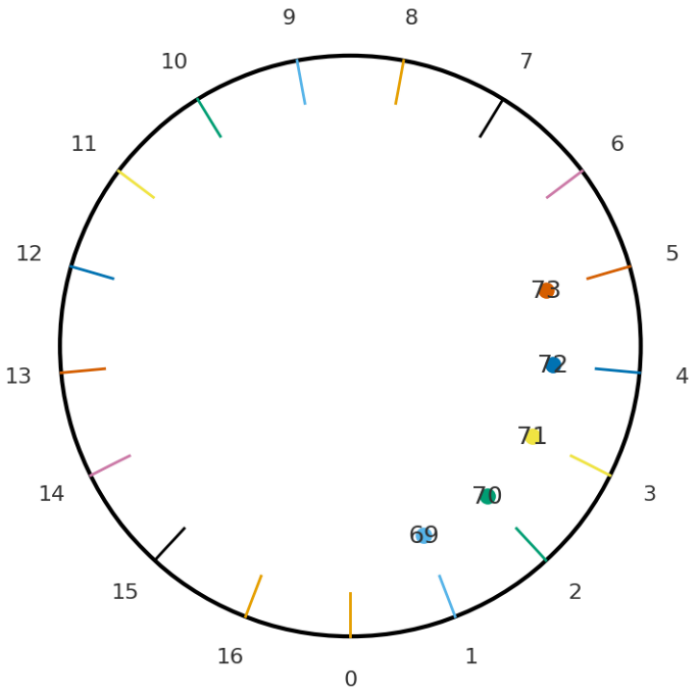
Anchor 'NORTHEAST': slots for indices 25-33



Anchor 'BERLIN': slots for indices 63-68



Anchor 'CLOCK': slots for indices 69-73



Tail Worked Example (indices 80-84)

Worked arithmetic (mod 26):

i=80: class=2, family=beaufort, slot=12, K=7 $\rightarrow P = K - C = 7 - 19 \pmod{26} \rightarrow 'O'$

i=81: class=3, family=vigenere, slot=13, K=4 $\rightarrow P = C - K = 9 - 4 \pmod{26} \rightarrow 'F'$

i=82: class=1, family=vigenere, slot=14, K=2 $\rightarrow P = C - K = 2 - 2 \pmod{26} \rightarrow 'A'$

i=83: class=5, family=vigenere, slot=15, K=16 $\rightarrow P = C - K = 3 - 16 \pmod{26} \rightarrow 'N'$

i=84: class=0, family=vigenere, slot=16, K=8 $\rightarrow P = C - K = 8 - 8 \pmod{26} \rightarrow 'A'$

Ciphertext: T J C D I

Plaintext : O F A N A

Round-trip & Drop-crib Schematic (conceptual)

Round-trip check (any span): $P \xrightarrow{\text{encrypt}(\text{family}, K)} C \xrightarrow{\text{decrypt}(\text{family}, K)} P$

Anchor-only rebuild (drop-crib tests):

- Drop BERLIN (63–68): undetermined → '??????'
- Drop CLOCK (69–73): undetermined → '?????'
- Drop BOTH (63–73): undetermined → '????????????'

Interpretation: when a crib is removed, those wheel slots remain unknown; nothing is 'hallucinated' back.