BILL AND NATHAN START RECORDING

Problem 2 on the HW

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Write a DFA for L in table form. Give Q, δ, s, F.
(We already know Σ.)

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Since there are $3 \times 4 \times 5 = 60$ states and $|\Sigma| = 3$, some of you wrote out all 180 transitions in the table.

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You can write the table with 3 transitions using algebra.

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For all $0 \leq i \leq 2$, $0 \leq j \leq 3$, $0 \leq k \leq 5$:
$\delta((i, j, k), a) = (i + 1 \pmod 3, j, k)$

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$\delta((i, j, k), b) = (i, j + 1 \pmod 4, k)$

The Solution

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$Q = \{(i, j, k) : 0 \leq i \leq 2 \text{ and } 0 \leq j \leq 3 \text{ and } 0 \leq k \leq 4\}$

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In the future do these problems the easy way.