Implementare GAIC Akaike-Rissanen (pg. L.48)

① **Cazul 1D:** $GAIC\text{-}R_N^1 \triangleq \ln\left(\hat{\lambda}_N^2[n\theta]\right) + \frac{2n\theta}{N}\ln\left(\sqrt{N}\right) =$

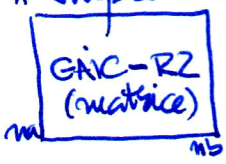
$n\theta = [n\theta]$

$= \ln\left(\hat{\lambda}_N^2[n\theta]\right) + \frac{n\theta}{N}\ln(N) = \ln\left(\hat{\lambda}_N^2[n\theta]\sqrt[N]{N^{n\theta}}\right)$

* Se implementează ca atare.

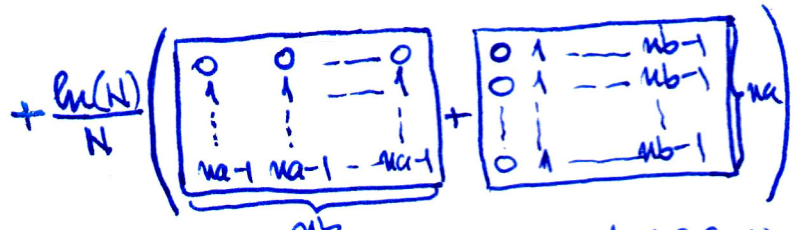
② **Cazul 2D:** ($n\theta = na + nb$) $GAIC\text{-}R_N^2[na, nb] = \ln\left(\hat{\lambda}_N^2[na, nb]\right) + \frac{na+nb}{N}\ln(N)$

* Implementare:



$= \ln$

$+$

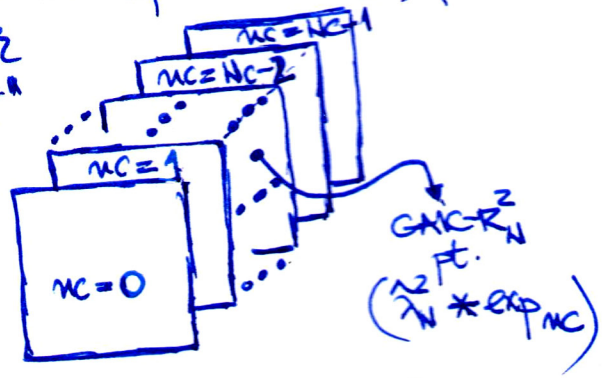


③ **Cazul 3D:** ($n\theta = na + nb + nc$) $GAIC\text{-}R_N^3[na, nb, nc] = \ln\left(\hat{\lambda}_N^2[na, nb, nc]\right) + \frac{na+nb+nc}{N}\ln(N) =$

$= \ln\left(\hat{\lambda}_N^2[na, nb, nc]\right) + nc\,\frac{\ln(N)}{N} + \frac{na+nb}{N}\ln(N) =$

$= \underbrace{\ln\left(\hat{\lambda}_N^2[na, nb, nc] \cdot e^{nc\cdot\ln(N)/N}\right)}_{GAIC\text{-}R_N^2 \text{ cu } \hat{\lambda}_N^2 \text{ modificat pt. fiecare } nc} + \frac{na+nb}{N}\ln(N)$

* Implementare: – se construiește un bloc 3D format din straturi 2D de tip $GAIC\text{-}R_N^2$, folosind:
- un ciclu for
- funcția "CAT"



④ **Cazul 4D:** ($n\theta = nb + nc + nd + nf$) $GAIC\text{-}R_N^4[nb, nc, nd, nf] = \ln \hat{\lambda}_N^2[nb, nc, nd, nf] +$

$+ \frac{nb+nc+nd+nf}{N}\ln(N) =$

$= \underbrace{\ln\left(\hat{\lambda}_N^2[nb, nc, nd, nf] \cdot e^{nf\cdot\ln(N)/N}\right)}_{GAIC\text{-}R_N^3 \text{ cu } \hat{\lambda}_N^2 \text{ modificat pt. fiecare } nf} + \frac{nb+nc+nd}{N}\ln(N)$

* Implementare: – se construiește un bloc 4D format din paralelipipede 3D de tip $GAIC\text{-}R_N^3$, folosind:
- un ciclu for
- funcția CAT