

Kas [x : X [i\_, j\_, k\_, l\_]] :=

Kas@If [PositiveQ[x], X<sub>-i,j,k,-l</sub>,  $\bar{X}_{-j,k,l,-i}$ ];

Kas [ (x : X |  $\bar{X}$ )<sub>fs\_\_</sub> ] := Module [ {v = 2 u<sup>2</sup> - 1, p,  $\gamma_S$ , m},

$\gamma_S$  =  $\gamma_{\#}$  & /@ {fs}; p = (x === X);

m = If [p,  $\begin{pmatrix} v & u & 1 & u \\ u & 1 & u & 1 \\ 1 & u & v & u \\ u & 1 & u & 1 \end{pmatrix}$ , -  $\begin{pmatrix} v & u & 1 & u \\ u & 1 & u & 1 \\ 1 & u & v & u \\ u & 1 & u & 1 \end{pmatrix}$ ];

CF@ $\Sigma_B[\{fs\}]$  [If [p, -1, 1], PQ[{},  $\gamma_S^* \cdot m \cdot \gamma_S$ ]]]