



Problem. Let $M_X := M_{X \times X}(\mathbb{Z})$ denote the collection of matrices with rows and columns labeled by the elements of a finite set X . Put a meta-IHOP+ R structure on $\{M_X\}$ (the collection of all such M_X 's) in such a way that the resulting tangle invariant will be strong enough to compute linking numbers:

Definition. The linking number l_{ij} of component i and component j in a tangle T is the number of times i crosses over j , counted with signs.