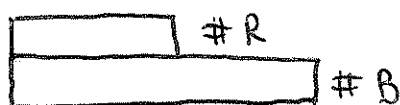


These are Hecke operators of the form



∴ we want to compose them.

We can compare this matrix multiplication to ordinary matrix multiplication.

Ordinary

Make an algebra where
the matrices are the
elements.

Matrix multiplication is
just a well-defined operation
(binary operation)

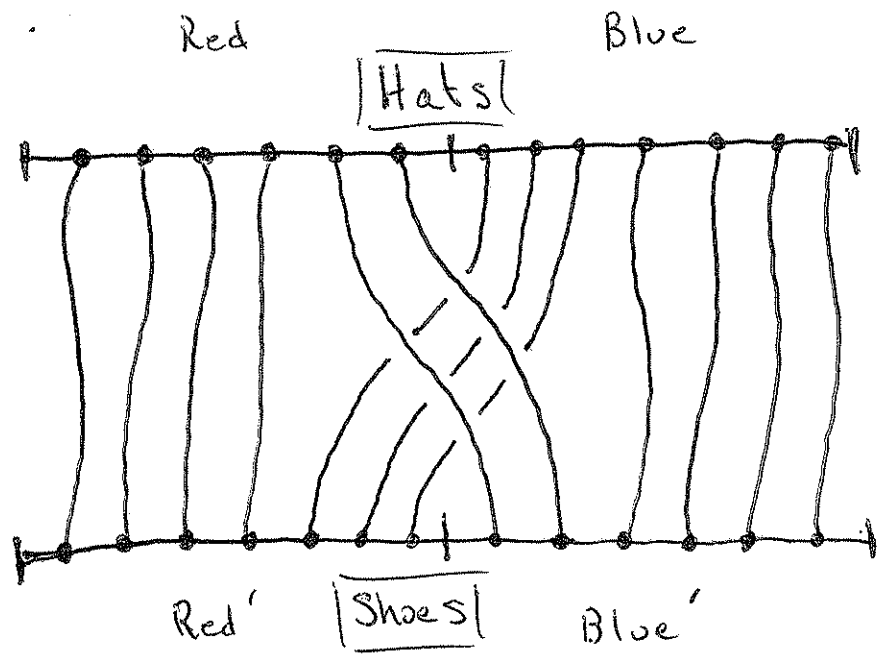
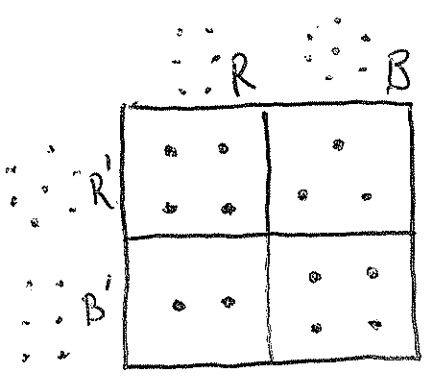
Weird

Make an algebra where
the matrices are the
basis elements

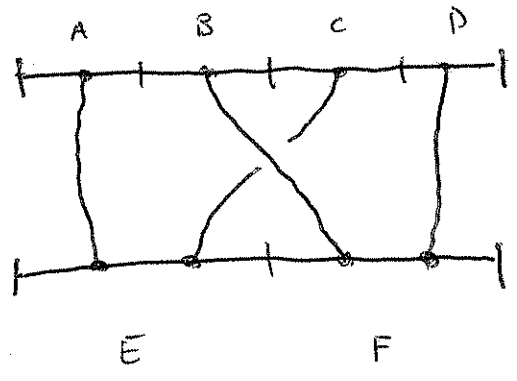
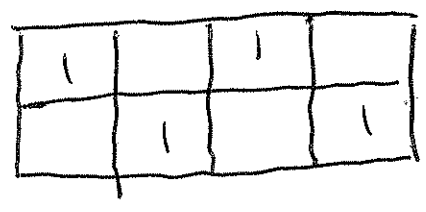
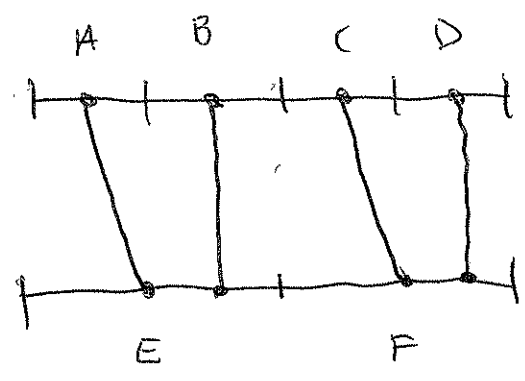
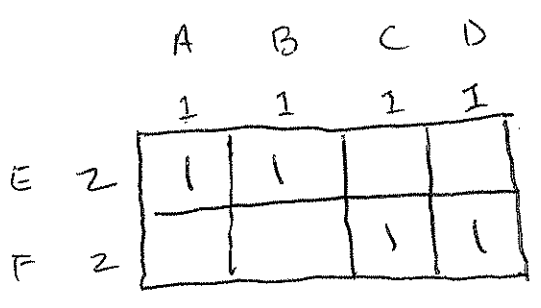
"Matrix multiplication" is
"fuzzy"
(bi-linear operation)

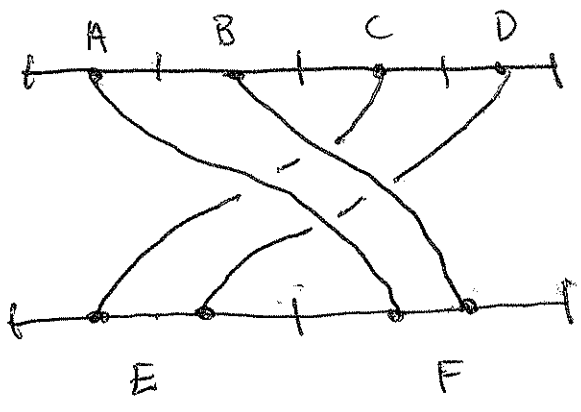
We have another notation for representing relationships between flags. This is called

"braid notation".



Recalling JB's example:





And these are Young diagrams in these braid pictures reminding us of the tilted Young diagrams that JB drew in the q -deformed Pascal's triangle.