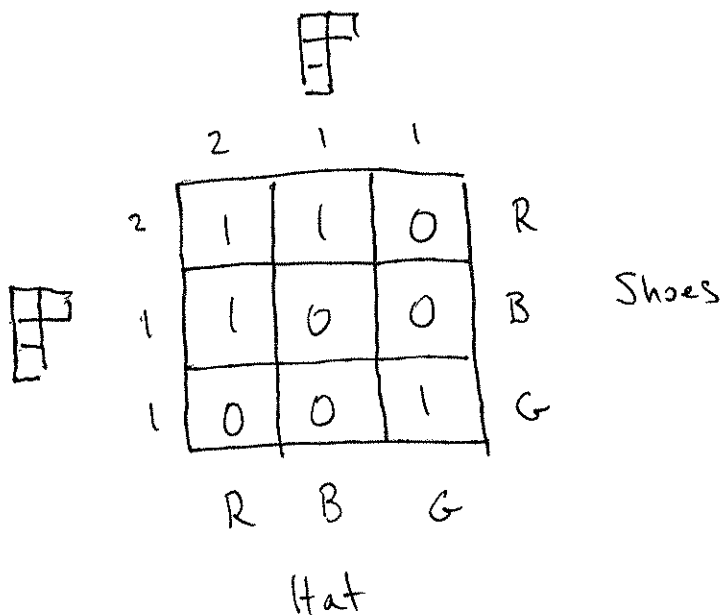
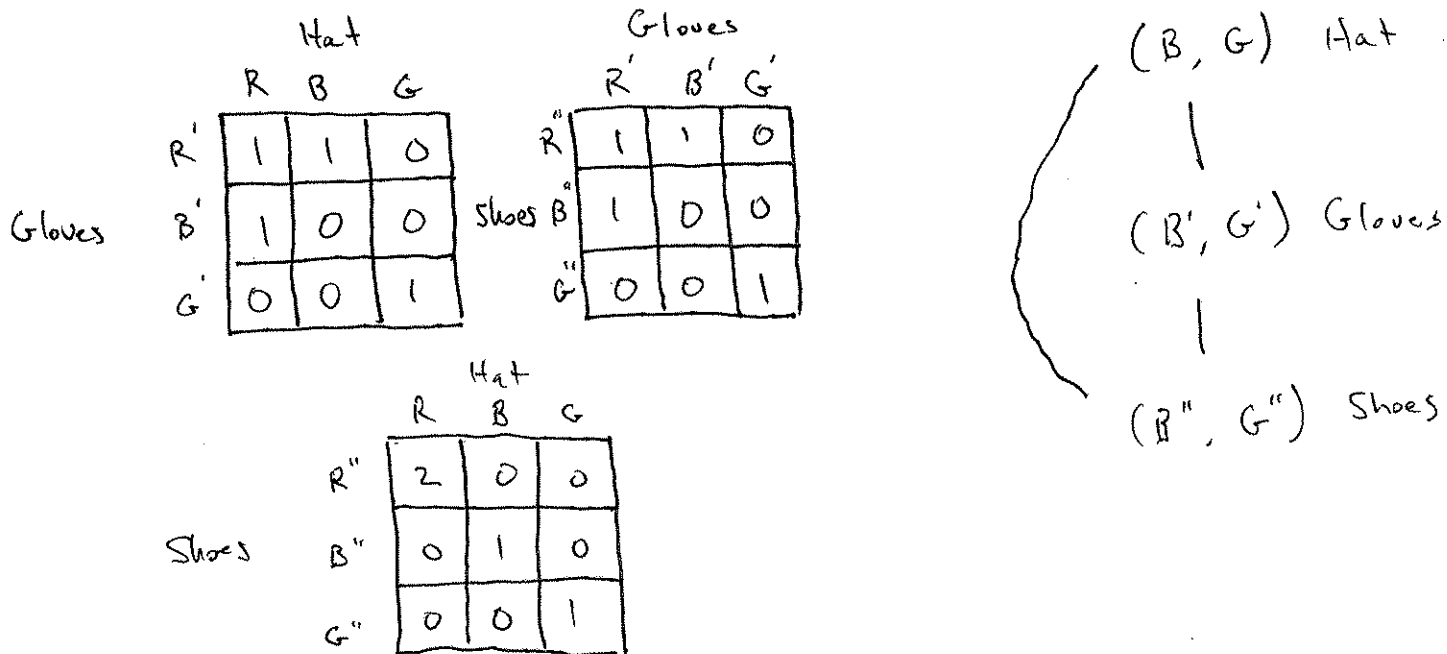


We have a notation for Hecke operators. Here is an example:



This notation describes relationship between flags on finite sets. This will extend to binary relationships between flags on finite dimensional vector spaces.

We want to try to compose these Hecke operators.



Let's do the same example with more "people".

	200	100	100
200	100	100	0
100	100	0	0
100	0	0	100

Hat

	R	B	G
R'	100	100	0
B'	100	0	0
G'	0	0	100

Gloves

	R'	B'	G'
R''	100	100	0
B''	100	0	0
G''	0	0	100

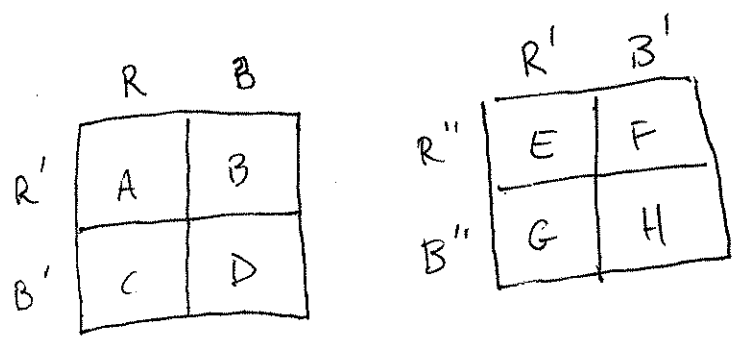
Gloves

Shoes

	R	B	G
R''	a	200-a	0
B''	200-a	a-100	0
G''	0	0	100

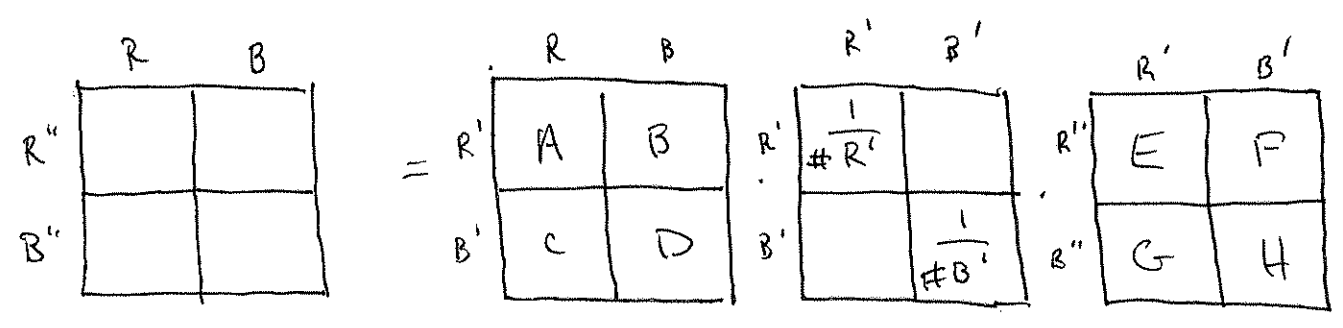
$100 \leq a \leq 200$

This should be most likely to occur when  $a = 150$ .



$$A + B = E + G = \#R'$$

$$C + D = F + H = \#B'$$



Here we are doing an approximate calculation of composition of Hecke operators. In a limiting case this will look like an imitation of matrix multiplication.