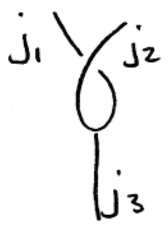
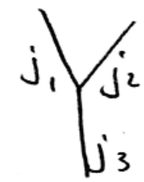
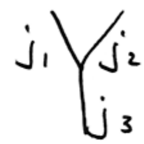
Alissa Crans
HW # 7

Show  $=$ $(-1)^{j_1+j_2-j_3}$ 

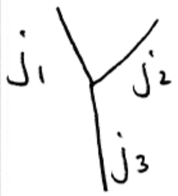
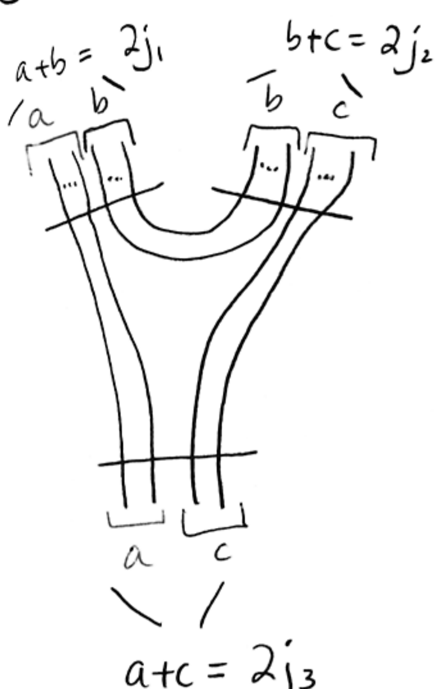
Fact ①:  $=$ $-$ 

Also- notice $j_1+j_2-j_3 = b$ = # of cups in 

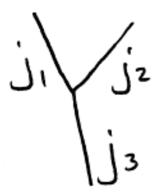
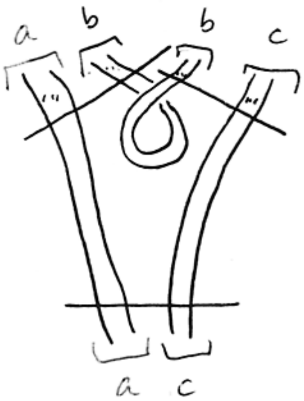
$a = j_1+j_3-j_2$

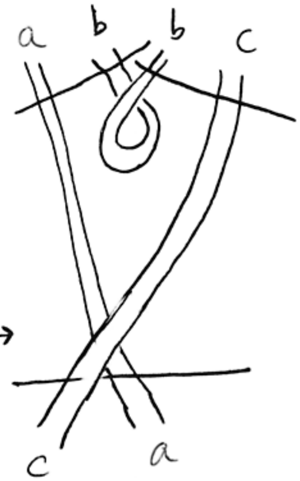
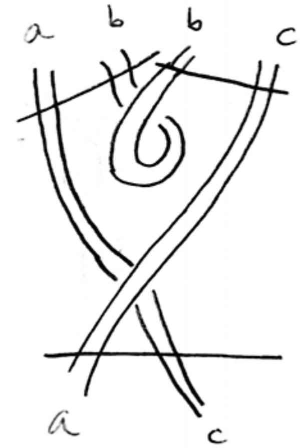
$b = j_1+j_2-j_3$

$c = j_2+j_3-j_1$

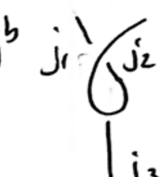
 $=$ 

Now we want to twist the cups.

 $=$ $(-1)^b$  by Fact 1.

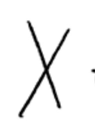
$=$ $(-1)^b$  $=$ $(-1)^b$ 

twist the bottom

$=$ $(-1)^b$ 

since

 $= \frac{1}{2}\Big($  $+$  $\Big)$

$= \frac{1}{2}\Big($  $+ \;||\Big)$ good!

$=$