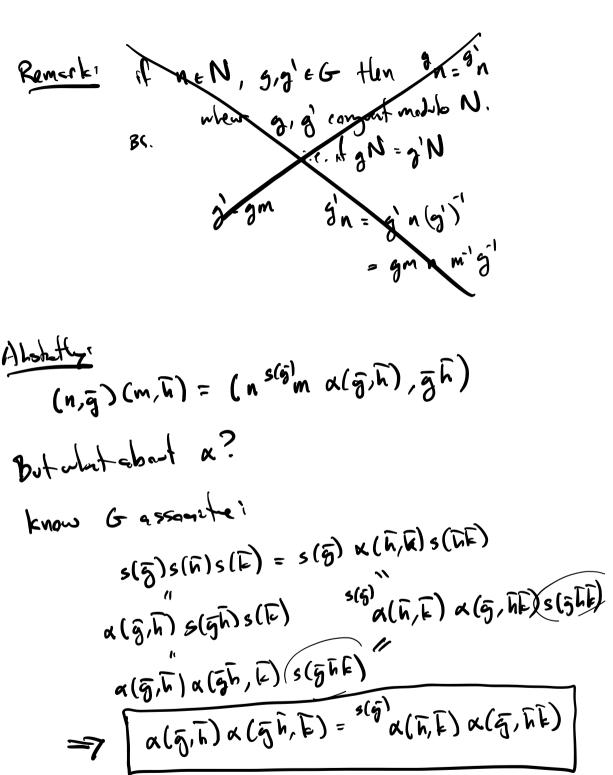
```
Today: Mostly Isaacs ch7
Sylow merm of: 2:3:53
   161 = 750'' suspect strayly that n_s = 1
  Part 1 7 char subgr of order either 52 or 53
     N== 1 N= 16 co N= 1 or 6
                  if No=1 Pchr G and 53
                   17 N5=6 36-756
Kestaber
15 15/26-17=53
                            => IKI=52=25
   K= EgeG | gPg = P Amall Pesyls63
                        if gek
       = ONEP
                             6-4-6
        Pesyl5G
                                    4127846913
                                      g q (P) 5' 2 q (P)
                                        GP ESYSG
  1 G/K = 2.3.5 = 30
                       Assury G has
                     Show G/k has a nomal Solow 3.
```

IF Ghas no nurnal Slow I subjest then by corresp. then SIK has no nonel sylow 5 ns(6/K)=15 ns(0/k) 16 so ns(6/k)=6 So how many elents Sadr 5 in G/k? 24: (4) (6) what about 113(6/k)? 13=1 113/10 so 13=1 or 10 if 13=10 as 20 elects feel 3 => 24,120 laket eluds => noral subje in O/K ande 3 (chr) => noral supp in 6 at order 3:25 = 75 = N Claimi if Hohr in G/K Kohr G then HESH is chr in G. 111=3-25 [G/N]=10 N5[UN)=51 Ns]Z So 3 to dr OIN 5-sylow. m) comosy to Q chr G ander 3.53 Pohr Qchar G N5(Q)=1 N5/3 5-9/n-m Q (P)=53

$$164=2000=245^3$$
 $N_2=21$ $N_2=1,5,25,125$
 $N_5=1$ $N_5=1$ $N_5=1$, $N_5=$

Extension Problem



"2-Pactor set"

```
Let's go from attract
NaG 6776/N what if could so hom

Trisq supermen. S must be injecte
      So s(6/N)=H<G N=FrT
       and HON = HOKT = (e)
           NH=G
    If in addition HAG Hen very G=NXH
Deflem TEAE for H,N<6 (u,u)(n',h')=(un',hh')
  2) the map NXH -> G va (u,h) -> nh 13 an
                                  isan. if 975.
   3) H,NOG, NH=G, HON=(e)
   4) HCC(N) (H,N)=6, HON=(e)
 Fungeti if H, M a b, NOH=(e) => HCCG(N)
  [h,n] = hnh'n' = (hnh')n' chNN cN
              = h (ub " - ) CH "H CH
                      > hnh-1,-1=e >
                             hn=nh D
```