

班级: 计01 姓名: 总选例 编号: 202001069 科目: 為敬 第 1 页

则 XTe·X = XT·X= e, 由于 H是G的子群,故 eeH, 因此 XT·ex EH, 是 eeH,

结合 (i) (ii) 知 足理 8.2.6 知 H, 为 G的子群

8.14. 不够设 H., H., ..., H. 都是G的子群.

用旧纳法的HL是Ch的子群。

结合(11)知知, 日中多个子群的交的为子群。

 $\begin{cases} 6.21 & \text{or} = \begin{bmatrix} 215 & 634 \\ 34 & 1256 \end{bmatrix} \cdot \begin{bmatrix} 123456 \\ 215634 \end{bmatrix} = \begin{bmatrix} 123456 \\ 341256 \end{bmatrix} = (16)(25) \end{cases}$ $\begin{aligned} \text{ro} &= \begin{bmatrix} 435612 \\ 65342 \end{bmatrix} \begin{bmatrix} 123456 \\ 435612 \end{bmatrix} = \begin{bmatrix} 123456 \\ 65342 \end{bmatrix} = (16)(25) \end{aligned}$ $\begin{aligned} \text{o}^{-1} &= \begin{bmatrix} 435632 \\ 12363 \end{bmatrix} = (153264) = (53)(32)(26)(64)(41) \end{aligned}$ $\begin{aligned} \text{o}^{-1} &= \begin{bmatrix} 435634 \\ 341256 \end{bmatrix} = (15)(26)(34) \end{aligned}$ $= \begin{bmatrix} 215634 \\ 341256 \end{bmatrix} = (15)(26)(34)$

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8.25. 若不存在所为 2的元素,则 a+a , 否则 a=a-a = e
   ①若元素的所为1,则该元素又能为e.
   ③由于 a 与 a l 总是 成 对 出 现 的 , 而 <a> 和 < a'> > 2
     ①和②的记录总数为奇数,与群的阶数为佛教,看.
     故外存在 Q+e的元素,使得 a2=e
8.27. \a= (1324) \address^2 = (12)(34) \address^3 = (1423) \address^4 = e.
     国此 (x>= { x, x2, x3, e}, 记 H为其子群.
     对 S4中元本进行遍历,有
    e. H = H
  V = \{(13)(24), (34), (14)(23), (12)\} = H_1
     (34) \cdot H = \{ (14)(23), (12), (13)(24), (34) \} = H_1
     (13) \cdot H = \{(243), (1234), (142), (13)\} = H_2
    (24)-H=\{(134),(1432),(123),(24)\}=H_3
    (14).H={ (132), (1243), (234), (14)}
    (23) H= { (124), (1342), (143), (2,3)}
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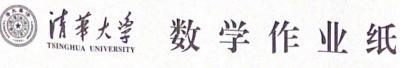
 $(123)H = \{(24), (134), (1432), (123)\} = H_3$ $(124)H = \{(1342), (143), (23), (124)\} = H5$ $(132)H = 1(1243)(234)(14)(132) = H_4$ $(134)H = H_3$ $(1234)H = H_2$ $(1432)H = H_3$

(1421H= H2 (1243)H= H4 (12)(34)H= H (143)H= H5 (1324)H=H (13)(24)H=H1

(234)H= H4 (134)H=H5 (14)(23)H=H, (243) H= H2 (1423) H= H

左陪集为{H, H, H2, H3, H4, H5}

b H.e = H > H(12) = {(14)(23), (34), (13)(24), (12)} = H, DH(13) = {(124), (1432), (234), (13)} = H6 DH(23) = { (134), (1243), (142), (23) 9 = Ha ► H (24) = { (132), (1234), (143), (24) } = H8 ► H (14) = { (243), (1342), (123), (14) } = H9 H (34)= } (13)(24), (12), (14)(23), (34) 4 = H1



班级: 计01 姓名: 冷逸湖 编号: 2020010名7 科目: 為飯 H(123) = H9 H(142) = H7 H(1324)= H H(12)(34) = H H(132) = H8 H(234) = H6 H(1342) = H9 H(13)(24) = H1 H(134) = H7 H (243) = H7 H(1423) = H H(14)(23) = H1 H (143) = H8 H (1234 = H8 H (1432) = H6 H(124) = H6 H (1243) = H7 放太陸集为《H, H, H6, H7, H8, H95 8.30 由于 A.B是G的子群, 故 IAI to, IBIto. (GI to., 又因为 B = A, 故: