Dummit & Foote Ch. 1.3: Symmetric Groups

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1. (2/16/23)

- $\sigma : (1,3,5)(2,4)$
- $\tau : (1,5)(2,3)$
- $\sigma^2 : (1,5,3)$
- $\sigma\tau : (2,5,3,4)$
- $\tau\sigma : (1,2,4,3)$
- $\tau^2\sigma : (1,3,5)(2,4)$ (because $\tau^2 = 1$, so $\tau^2\sigma = \sigma$)

2. (2/16/23)

- $\sigma : (1,13,5,10)(3,15,8)(4,14,11,7,12,9)$
- $\tau : (1,14)(2,9,15,13,4)(3,10)(5,12,7)(8,11)$
- $\sigma^2 : (1,5)(3,8,15)(4,11,12)(7,9,4)(10,13)$
- $\sigma\tau : (1,11,3)(2,4)(5,9,8,7,10,15)(13,14)$
- $\tau\sigma : (1,4)(2,9)(3,13,12,15,11,5)(8,10,14)$
- $\tau^2\sigma : (1,2,15,8,3,4,14,11,12,13,7,5,10)$