

19. Suppose that α can be written as a product on m 2-cycles and β can be written as product of n 2-cycles. Then juxtaposing these 2-cycles we can write $\alpha\beta$ as a product of $m + n$ 2-cycles. Now observe that $m + n$ is even if and only if m and n are even or both odd.
71. If α has odd order k and α is an odd permutation then $\epsilon = \alpha^k$ would be odd.