1. Problem 2.22, pg. 123 of the text.

2. Problem 2.26, pg. 124 of the text.

3. Problem 2.29 (i), pg. 124 of the text.

4. How many elements of $S_6$ have the same cycle structure as $(135)(246)$?

5. Let $\alpha \in S_n$. Prove that the minimum number of simple transpositions needed to write $\alpha$ as a product of simple transpositions equals the number of inversions of $\alpha$.

6. Problem 2.39 (i), pg. 146 of the text.

7. Problem 2.42, pg. 147 of the text.

8. Let $G$ be a group. Assume that $G$ is generated by $x, y, z$. Also assume that $x^4 = y^4 = z^4 = e, xy = z, yz = x, zx = y$ and $x^2 = y^2 = z^2$. Prove that $G$ has at most eight elements.