- From Section 8:
  - Let $f = (134)(26)(587)$, $g = \begin{pmatrix} 1 & 2 & 3 & 4 & 5 & 6 & 7 & 8 \\ 1 & 4 & 6 & 5 & 7 & 8 & 2 & 3 \end{pmatrix}$ be elements of S_8.
    1. Please write f in 2-line notation and write g in cycle notation.
    2. Please compute $f \circ g$ and $g \circ f$.
  - Please solve Exercises 8.3, 8.11, 8.15 (parts c & d), and 8.23 from the textbook.
- From Section 12:
  - Please solve exercises 12.1 (parts a & c), 12.4 (parts b, c, & e), 12.8, 12.13, and 12.21 from the textbook.

* Prove that any group with at least two elements has a nontrivial automorphism.