Logic Exercises for Week 1:

- Convert the following propositional logic sentences first into Conjunctive Normal Form and then into Disjunctive Normal Form:
  - \((p \land q) \lor ((\neg r \lor \neg s) \land (p \rightarrow q))\)
  - \((a \rightarrow \neg b) \land (\neg b \lor c) \land (a \land \neg c)\)
  - \(((p \lor q) \land (\neg p \land (q \lor \neg r)) \land (\neg s \lor \neg q)) \lor \neg q\)

- Consider all of the logical connectives discussed in class. Identify at least two minimal subsets of these connectives that are adequate to express all of the others.