Question 1 (10 marks)

For this question, we restrict attention to judgement aggregation problems with the agenda 
\{p, \neg p, q, \neg q, p \land q, \neg(p \land q)\}. We know that there exists no judgement aggregation procedure 
for this agenda that is consistent, complete, anonymous, neutral, and independent.

(a) Show that the 2/3-supermajority rule (which accepts a proposition from the agenda 
if and only if strictly more than 2/3 of the individuals accept it) satisfies all of these 
requirements, except for completeness.

(b) Show that this agenda fails to be safe for all uniform quota rules with a quota of less 
than 2/3.