How to test for Fairness Criteria

Anonymity

Neutrality

Monotonicity

Independence of Irrelevant Alternatives

Majority Criterion

Condorcet Criterion
Anonymity: Have two voter switch ballots. If the results change, the method violates.

Neutrality: (2 candidates) Have every voter switch their vote \( A \leftrightarrow B \). If the result doesn’t change, violates.

Monotonicity: Have some voters change their ballot only in a way that favors the winning candidate. If the result changes, violates.

Independence of Irrelevant Alternatives

Eliminate a losing candidate. If the result changes, violates.
