1.	Who wins plurality?		6	4	3	2
- ·	The true protonoy i		А	В	С	С
		2nd	В	С	В	В
		3rd	\mathbf{C}	А	А	D
2.	Who <i>really</i> loses plurality?	$4 \mathrm{th}$	D	D	D	A
3.	Who wins each head-to-head matchup? Give the scores.					
	A vs B A vs C A vs D B vs C	B vs D	1		C v	s D

4. Who wins pairwise comparison?

5. Who *really* loses pairwise comparison?

6, What happens to the winners if we eliminate that total loser? (check plurality and pairwise)

7. Who are the losers after that first elimination? (check plurality and pairwise)

8. What happens to the winners if we eliminate A and D? (check plurality and pairwise)

9. What happens to the winners if we eliminate B and D? (check plurality and pairwise)

10. For 8, both answers are the same. For 9 both answers are the same. Why is that? $_{\text{Hint: #3.}}$

11. What order do candidates get eliminated in survivor?

Voting method: takes a preference schedule and decides which candidate is best Fairness criteria: takes a voting method and decides if it is good enough

Two main fairness criteria today:

(M) **Majority**: if a candidate has more than half of the first place votes (they are called the **majority candidate**), then the voting method should declare them the winner.

(C) **Condorcet**: if a candidate wins every head-to-head matchup (they are called the **Condorcet candidate**), then the voting method should declare them the winner.

1. On the front, was any candidate a majority candidate?

2. What does the Majority fairness criterion say the voting methods should do?

3. Did any of the methods break the rule? Could they?

4. On the front, was any candidate a Condorcet candidate?

5. What does the Condorcet fairness criterion say the voting methods should do?

6. Did any of the methods break the rule?

We often talk about a preference schedule, a voting method, and a fairness criterion all at once. In this case, you first check if the fairness criterion even says anything about this preference schedule. If it does not, then it is an "inconclusive test." If it does say something, then either the voting method passes or fails. If it fails, then we get a "violation." However if it passes, then we also call that an "inconclusive test" since maybe it'll fail later.

7. Can the plurality voting method ever fail the majority fairness criterion? (Explain why or why not.)

8. Can the pairwise comparison voting method ever fail the Condorcet fairness criterion? (Explain why or why not.)