

Social Choice 3/2/21 - Smith sets and strong candidates

1. Mark all the true statements. (There may be more than one.)

- A The Smith set is a dominating set.
- B Every dominating set is a Smith set.
- C The Smith set always has at least two members.
- D It's impossible to have two disjoint (non-overlapping) dominating sets.

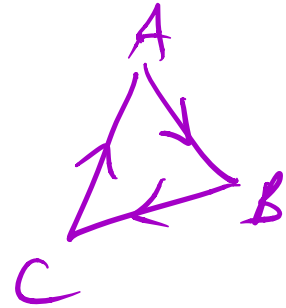
} the Smith set is the smallest dominating set

2. Suppose you have an election with (exactly) three candidates and the preference schedule has a Condorcet cycle. Which one of these can you be sure of?

- A All candidates are strong.
- B No candidates are strong.
- C You need a tiebreaker to find the strong candidates.

No, a Condorcet candidate is a solo strong candidate.

This is true! because the domsets are nested, no two can be disjoint.



No one candidate is Condorcet

no two candidates both beat the other

so $D_A = D_B = D_C = S = C$
everybody's strong!