Caitlin + Kit Kat suggest:

→ Near-decisive – A and B tie only if number of A>B votes equals number of B>A votes

→ Anonymous – exchanging votes from two voters doesn't change outcome

Eric brings up idea about candidate preference (neutrality)

→ If A starts the election with a +3 (or +something) preference, how does that get represented when switching the place of A and B

Emily suggests

→ Neutral – if all votes are reversed, the initial winning candidate should lose and the initial losing candidate should win. A tie should still be a tie.

Austin suggests

→ Monotone – if a candidate receives a vote, it does not result in them being ranked lower than they were before receiving the vote.

... back to proving the conjecture...

If anonymous, we can condense the voting list to say

$$x : A>B$$

$$n-x : B>A$$

How does monotone apply? If A wins and x increases, A should still win.

~~Benefits of plurality~~ Voting Qualities/Criterion

- all votes are equal   anonymous
- always a winner except when voters are tied   near decisive
- largest group of people getting their first choice   agrees with plurality
- ~~break~~ all candidates are treated equally   neutral
- more votes to a candidate translate to that card. ~~doing better~~   monotone

not ranked lower

Conjecture:

    A two-candidate election method that is near decisive, neutral, anonymous, and monotone is plurality.

Jan 27

- antiplurality
- plurality
- instant runoff
- Borda Count
- Coombs
- Copeland
- Sequential pairwise w/ fixed agenda
- dictatorship
- pineapple

Conjecture: The only method in a two-candidate election that is neutral, anonymous, monotone, and near decisive is plurality.

Given some votes

    1   $A > B$

    2   $B > A$

    3   $B > A$

    $\vdots$

    n $\ldots$

then, using the 4 conditions, the candidate with a majority of votes wins