



High School Challenge '17

Every Vote Counts

Teaser Puzzle

The votes are in! The city of Centopia (with a convenient population of 100 voters) recently held an election for Mayor. Each citizen ranked three candidates from favorite to least favorite.



Unfortunately, Centopia's election commissioner isn't sure how to pick the winner. After considering several thousand different strategies, she has narrowed down her choices to the three listed on the next page.

- **Strategy #4912:** *Condorcet method.* Consider three head-to-head comparisons of the candidates by ignoring one candidate at a time, and elect the candidate who is ranked higher by a majority of voters in both of his/her head-to-head comparisons.
- **Strategy #5127:** *First-past-the-post.* Elect the candidate with the most “1st choice” votes.
- **Strategy #5874:** *Instant-runoff voting.* Eliminate the candidate with the least “1st choice” votes, and elect the candidate ranked higher by a majority of voters in a head-to-head comparison between the remaining two.

The funny thing is, each strategy would choose a different candidate for this election. That’s politics, but by using the strategy numbers to pick letters from the winners’ names, you’ll reveal a **two-word term used in decision theory** which describes this situation.

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[4	9	1	2]	[5		1	2	7]	[5	8	7	4]

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