

VOTING

UNDERSTANDING VOTING

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THE VOTING METHODS

- Borda Count
- Instant Runoff Voting (IRV)
- Plurality Voting

BORDA COUNT

- Borda Count method: In this method a certain amount of points are assigned to each candidate based on their ranking, when the values for all the ballots are added up, the candidate with the largest point total is the winner.
- Example problem;
- A survey asks to rank which pet people would prefer to have. Using the Borda Count Method, who would be the winner?
- D= Dog, C= Cat, R= Rabbit, P= Parrot

BORDA COUNT

| Number Of Voters | 10 | 6 | 5 | 1 | 4 | 12 |
|------------------------|----|---|---|---|---|----|
| 1 st Choice | D | C | D | R | D | D |
| 2 nd Choice | C | D | R | C | P | C |
| 3 rd Choice | R | R | P | P | R | P |
| 4 th Choice | P | P | C | D | C | R |

Since there are 4 choices

- 1st place gets 4 points
- 2nd place gets 3 points
- 3rd place gets 2 points
- 4th place gets 1 point

BORDA COUNT

| Number of Voters | 10 | 6 | 5 | 1 | 4 | 12 |
|--------------------------------------|--------------------|-------------------|-------------------|------------------|-------------------|--------------------|
| 1st Choice (4 pts) | D $10 * 4 = 40$ | C $6 * 4 = 24$ | D $5 * 4 = 20$ | R $1 * 4 = 4$ | D $4 * 4 = 16$ | D $12 * 4 = 48$ |
| 2nd Choice (3 pts) | C $10 * 3 = 30$ | D $6 * 3 = 18$ | R $5 * 3 = 15$ | C $1 * 3 = 3$ | P $4 * 3 = 12$ | C $12 * 3 = 36$ |
| 3rd Choice (2 pts) | R $10 * 2 = 20$ | R $6 * 2 = 12$ | P $5 * 2 = 10$ | P $1 * 2 = 2$ | R $4 * 2 = 8$ | P $12 * 2 = 24$ |
| 4th Choice (1 pt.) | P $10 * 1 = 10$ | P $6 * 1 = 6$ | C $5 * 1 = 5$ | D $1 * 1 = 1$ | C $4 * 1 = 4$ | R $12 * 1 = 12$ |

Point totals

Dogs: $40+20+16+48+18+1=143$

Cats: $24+30+3+36+5+6= 104$

Rabbits: $4+15+20+12+8+12=71$

Parrots: $12+10+2+24+10+6=64$

Using the Borda count method we can come to the conclusion that a majority of people who took the survey preferred dogs over all other choices

INSTANT RUNOFF VOTING (IRV)

This method is often referred to as alternative choice voting, or plurality voting with elimination. In this voting method you rank candidates in order of preference. If a candidate gets a majority of first choices the candidate wins, if not the candidate with the fewest votes is eliminated and the voters who picked the eliminated candidate has their second choice candidate counted, this process keeps going until a candidate gets majority.

LOOK AT THIS PREFERENCE SCHEDULE AND FIND THE WINNER USING INSTANT RUNOFF VOTING

| Number of Voters | 9 | 5 | 2 | 5 | 8 | 6 |
|------------------------|---|---|---|---|---|---|
| 1 st Choice | F | K | L | K | G | K |
| 2 nd Choice | G | L | P | G | P | F |
| 3 rd Choice | P | P | F | P | F | G |
| 4 th Choice | L | G | K | F | K | P |
| 5 th Choice | K | F | G | L | L | L |

Step 1: Disqualify P because it has zero 1st place votes

Step 2: Disqualify candidate L with 2 first place votes

Step 3: Disqualify candidate G with eight 1st place votes

Step 4: F wins Majority over left over candidate K

PLURALITY METHOD

In this method the choice with the most first preference votes is the winner, the other preferences are not considered or in some cases even used. Although this method is often linked to the majority method, it's still possible for a winner to have plurality without having a majority.

A GROUP OF YOUNG ADULTS RANK THE BEST PHONE SERVICE TO HAVE.

T= T-MOBILE, V= VERIZON, S= SPRINT

FIND THE MOST PREFERRED PHONE SERVICE USING THE PLURALITY METHOD

| Number of Voters | 10 | 4 | 5 | 3 | 7 |
|------------------------|----|---|---|---|---|
| 1 st Choice | T | S | V | V | T |
| 2 nd Choice | V | T | T | S | S |
| 3 rd Choice | S | V | S | T | V |

T- Mobile: 17

Verizon: 8

Sprint: 4

Using the plurality method T- mobile would be the winner.

In a situation where a plurality winner doesn't have majority is if the choice is the most preferred of first choices but falls below the 50 percent majority.

PLURALITY VOTING AND THE US ELECTION

In our country we use the Plurality voting method and although this method might be looked at as the simplest one compared the ones mentioned, this method comes with its own faults. In our election a candidate needs at least 270 out of 538 electoral votes (slightly over majority) to win the presidency. The number of electors each state gets depends on how many members of congress it has. When we vote for a president what we are actually voting for is who our state will vote for. You may think since we use the Plurality method in most cases it's a fair win however there are situations where a candidate that got less votes overall still won, for example in 2000 former Vice President Al Gore received the most votes nationally winning the popular vote by 500,000 votes over George W. Bush however Gore still lost by 5 electoral votes. There have been other incidents where the winner of the election isn't the candidate with the popular vote bringing forth the question of whether or not we are using a fair voting method. This method of voting has brought some to think since where shown two main candidates were forced to pick the lesser of two evils if both candidates aren't suitable.