D1: Voting Methods

Group Activity

1. Ranked Choice Voting Election. Our class will elect the best candy out of the three that are running for office: **R=Reese's Peanut Butter Cups, S=Starburst, K=KitKat**

Please get ballot forms for your group and fill them out anonymously and turn them in. When all the results are tabulated, make a preference schedule.

Preference Schedule

Borda	Number of Voters	4	6	1	2	7	7
3	1st choice	R	R	S	S	K	K
2	2nd choice	S	K	R	K	S	R
1	3rd choice	K	S	K	R	R	S

a. How many voters voted in this election? 27

b. How many votes are needed for a majority? $27 \div 2 = 13.5$ Round up to 14 votes

c. How many votes are needed for a plurality win? Divide by # of candidates $27 \div 3 = 9$ Round up to 10 votes

d. Find the winner under the plurality method.

R = 10 S = 3 (K = 14)

Kitkat is the winner

e. Find the winner under the Instant Runoff Voting method.

R = 10 S = 3 K = 14

+1 +2

11 (16) Kitkat wins

f. Find the winner under the Borda Count method.

$R = 1 \cdot 9 + 2 \cdot 8 + 3 \cdot 10 = 55$

$S = 1 \cdot 13 + 2 \cdot 11 + 3 \cdot 3 = 44$

$K = 1 \cdot 5 + 2 \cdot 8 + 3 \cdot 14 = (63)$ Kitkat wins

g. Find the winner under the Pairwise Comparisons method.

(R 17 S 10) (S 7 K 20)

R 11 (K 16)

K won 2 pairs so K wins the Pairwise method

h. Which method do you think is the most fair in this situation and why?

opinion.