

1. Majority vs Plurality, Preference Schedule

Definition: **Plurality Winner**

Definition: **Majority Winner**

Ten Alaskans are asked to vote on the “best” of four Alaskan villages.

Voters: Bishop, Claman, Dunbar, Giessel, Hughes, Kawasaki, Myers, Olson, Tobin, Wilson

Villages: Adak, Bettles, Chevak, Diomed

(a) Given the vote below, who wins? Did they win a **majority**?

voter	Bishop	Claman	Dunbar	Giessel	Hughes	Kawasaki	Myers	Olson	Tobin	Wilson
vote	A	A	A	A	B	B	B	C	C	D

(b) Suppose, in a different world, they voters voted this way. Now what?

voter	Bishop	Claman	Dunbar	Giessel	Hughes	Kawasaki	Myers	Olson	Tobin	Wilson
vote	A	A	A	B	B	B	C	C	C	D

(c) One option is to **collect more information**. See the new vote tally.

voter	Bishop	Claman	Dunbar	Giessel	Hughes	Kawasaki	Myers	Olson	Tobin	Wilson
1st choice	A	A	A	B	B	B	C	C	C	D
2nd choice	C	C	C	C	C	C	D	D	B	C
3rd choice	B	B	B	D	D	D	B	B	A	B
4th choice	D	D	D	A	A	A	A	A	D	A

Observe that the vote tally in part (c) can be usefully summarized as follows:

# votes	
1st choice	
2nd choice	
3rd choice	
4th choice	

2. Fairness Criteria

3. Condorcet Criterion

4. Condorcet Winner

5. Show that Chevak (C) is the Condorcet Winner in the vote tally summarized in part 1d (and copied below).

# votes	3	3	2	1	1
1st choice	A	B	C	C	D
2nd choice	C	C	D	B	C
3rd choice	B	D	B	A	B
4th choice	D	A	A	D	A