

Voting Methods Working Group (VMWG) , NIST Interoperability Working Group									
<b>Modeling Subgroup for Voting Method Tabulation Methods 08/30/2018 DRAFT</b>									
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<b>DRAFT NIST SP 1500-10X Voting Methods , Section 3.1.3 Tabulation Methods, Ranked Choice Voting, Test Conditions and Expected Outcomes</b>									
The tabs in this spreadsheet define the Test Conditions and Expected Outcomes for Logic and Accuracy Testing for each named Ranked Choice Voting Tabulation Method Variant.									
Tabulation Method tests and outcomes specification do not include the election contest decision rules, by design.									
For specification of election contest outcome tests, see the spreadsheet corresponding to Section 3.1.4 Voting Methods Test Conditions and Expected Outcomes.									
Voting Methods use one of more Tabulation Methods, and therefore the Tabulation Method's corresponding Tests specification.									
Voting methods Test Conditions and Expected Outcomes, in contrast to Tabulation Methods Tests, test the Voting Method Decision Rule Set for logic and accuracy of applying the election outcome decision rule(s).									
TODO: POINTERS TO REFERENCES									
[Conformance Testing: VVSG1.1 Volume II, P.14 -LL]									
[Functionality Testing: VVSG1.1, Volume II, P. 53-56 -LL]									

Test Set 0	12 ballots listed. Omitted 1st choice (ballot 6), overvoted 2nd choice (ballot 9)
Description round 0	Shows what a tabulator tape would report for totals of the 12 ballots. Only 1st choices would be reported thus 2nd thru 4th choices grayed out. Overvotes and undervotes are shown to account for votes not assigned to candidates.
Description round 1	This would match round 0 if all ballots had valid 1st choice votes. Since ballot 6 had no 1st choice selection, the 2nd choice selection (candidate B) is used in the candidate count. A new count is determined. This round does not produce a winner and candidate D, having the least votes, will be eliminated.
Description round 2	A new count is determined after candidate D is eliminated on ballot 10 and the 2nd choice (candidate B) is used instead. There still is no winner and candidate C will now be eliminated having the least votes.
Description round 3	A new count is determined after candidate C is eliminated on ballots 3, 9 and 11. Candidate B is used on ballots 3 and 11 being the 2nd choice. Ballot 9 is eliminated as the 2nd choice is overvoted. Candidate B is the winner having more than 50% of the total remaining votes cast.

Ballot advanced to next highest ranked continuing candidate																
Ballot #	Tabulated designated 1st choice-Round 0)				Round 1				Round 2				Round 3			
	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice
1	A	B	C	D	A	B	C	D	A	B	C	D	A	B	C	D
2	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D	C
3	C	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D
4	A	C	B	D	A	C	B	D	A	C	B	D	A	C	B	D
5	B	C	A	D	B	C	A	D	B	C	A	D	B	C	A	D
6		B	C	A		B	C	A		B	C	A		B	C	A
7	A	C	B	D	A	C	B	D	A	C	B	D	A	C	B	D
8	B	A	C	D	B	A	C	D	B	A	C	D	B	A	C	D
9	C	A/D	B		C	A/D	B		C	A/D	B		C	A/D	B	
10	D	B	A	C	D	B	A	C	D	B	A	C	D	B	A	C
11	C	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D
12	A	B	C	C	A	B	C	C	A	B	C	C	A	B	C	C
Candidate	Total	%	Transfer		Total	%	Transfer		Total	%	Transfer		Total	%	Transfer	
A	4	36%			4	33%			4	33%			4	36%		
B	3	27%			4	33%	1		5	42%	1		7	64%	2	
C	3	27%			3	25%			3	25%			0	0%	-2	
D	1	9%			1	8%			0	0%	-1		0	0%		
Votes Counted	11				12				12				11			
Inactive	0				0				0				1			
Total Ballots	11				12				12				12			
Overvote	0															
Undervote	1															
Current Active choice																
Eliminated Choice/Skipped ranking																

Test Set 1	Overvote - Exhaust ballot. 15 ballots listed. 1st choice overvoted (ballot 1). 2nd choice overvoted (ballot 8). Skipped choices are advanced to next highest ranked continuing candidate.*
Description round 0	Shows what a tabulator tape would report for totals of the 15 ballots. Only 1st choices would be reported thus 2nd thru 4th choices grayed out. Overvotes and undervotes are shown to account for votes not assigned to candidates. (1 overvote and 0 undervotes)
Description round 1	This would match round 0 if all ballots had valid 1st choice votes. Since 1st choice on ballot 1 is overvoted, ballot 1 is eliminated and is omitted from further counting. A new count is determined. This round does not produce a winner and candidate D, having the least votes, will be eliminated.
Description round 2	A new count is determined after Candidate D is eliminated. Candidate C is used on ballot 14 being the 2nd choice. There still is no winner and candidate C will now be eliminated having the least votes.
Description round 3	A new count is determined after candidate C is eliminated on ballots 3, 8 and 14. Candidate B is used on ballot 3, being the 2nd choice. Ballot 8 is eliminated as the 2nd choice is overvoted. The 3rd choice in ballot 14 was not voted so candidate B, the 4th choice, is selected. Candidate B is the winner having more than 50% of the total remaining votes cast.

Ballot advanced to next highest ranked continuing candidate																
Ballot #	Tabulated designated 1st choice-Round 0)				Round 1				Round 2				Round 3			
	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice
1	A,B		C	D	A,B		C	D	A,B		C	D	A,B		C	D
2	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D	C
3	C	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D
4	A	C	B	D	A	C	B	D	A	C	B	D	A	C	B	D
5	B	C	A	D	B	C	A	D	B	C	A	D	B	C	A	D
6	A	C	B	D	A	C	B	D	A	C	B	D	A	C	B	D
7	B	A	C	D	B	A	C	D	B	A	C	D	B	A	C	D
8	C	B,D	A		C	B,D	A		C	B,D	A		C	B,D	A	
9	B	C	A	D	B	C	A	D	B	C	A	D	B	C	A	D
10	A	B	D	C	A	B	D	C	A	B	D	C	A	B	D	C
11	B	C	A	D	B	C	A	D	B	C	A	D	B	C	A	D
12	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D	C
13	A			C	A			C	A			C	A			C
14	D	C	B		D	C		B	D	C		B	D	C		B
15	A	B	D	C	A	B	D	C	A	B	D	C	A	B	D	C
Candidate	Total	%	Transfer		Total	%	Transfer		Total	%	Transfer		Total	%	Transfer	
A	5	36%			5	36%			5	36%	0		5	38%	0	
B	6	43%			6	43%			6	43%	0		8	62%	2	
C	2	14%			2	14%			3	21%	1		0	0%	-2	
D	1	7%			1	7%			0	0%	-1		0	0%	0	
Votes Counted	14				14				14				13			
Inactive	0				1				1				2		1	
Total Ballots	15				15				15				15			
Overvote	1															
Undervote	0															
Current Active choice																
Eliminated Choice/ Skipped ranking																

\* I the case of this skipped choice, advancing to the next highest ranked continuing candidate results in the ballot being cast for the voter's last choice. I would think that this does not truly reflect the voter's intent. Should we consider a rule that prevents a vote being cast for a voter's last choice when all candidates are allowed to be ranked and a maximum numeric rank is given to a candidate?

Test Set 2	Overvote - Skip to next continuing candidate. 15 ballots listed. 1st choice overvoted (ballot 1). 2nd choice overvoted (ballot 8). Skipped choices are advanced to next highest ranked continuing candidate.*
Description round 0	Shows what a tabulator tape would report for totals of the 15 ballots. Only 1st choices would be reported thus 2nd thru 4th choices grayed out. Overvotes and undervotes are shown to account for votes not assigned to candidates. (1 overvote and 0 undervotes)
Description round 1	This would match round 0 if all ballots had valid 1st choice votes. Since 1st choice is overvoted in ballot 1 and a second choice was omitted, both are skipped and C is selected. A new count is determined. This round does not produce a winner and candidate D, having the least votes, will be eliminated.
Description round 2	A new candidate count is determined after Candidate D is eliminated on ballot 14 and the 2nd choice (candidate C) is selected instead. A new count is then determined. There still is no winner and candidate C will now be eliminated, having the least votes.
Description round 3	A new count is determined after candidate C is eliminated on ballots 1, 3, 8 and 14. Ballot 1 is eliminated as the 4th choice is candidate D, who has already been eliminated, and there are no more choices. Candidate B is selected on ballot 3, being the 2nd choice. Candidate A, the 3rd choice, is selected on Ballot 8 as the 2nd choice is skipped due to being overvoted. The 3rd choice in ballot 14 was not voted so candidate B so the 4th choice, is selected. Candidate B is the winner having more than 50% of the total remaining votes cast.

Ballot advanced to next highest ranked continuing candidate																
Ballot #	Tabulated designated 1st choice-Round 0)				Round 1				Round 2				Round 3			
	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice
1	A,D		C	D	A,D		C	D	A,D		C	D	A,D		C	D
2	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D	C
3	C	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D
4	A	C	B	D	A	C	B	D	A	C	B	D	A	C	B	D
5	B	C	A	D	B	C	A	D	B	C	A	D	B	C	A	D
6	A	C	B	D	A	C	B	D	A	C	B	D	A	C	B	D
7	B	A	C	D	B	A	C	D	B	A	C	D	B	A	C	D
8	C	B,D	A		C	B,D	A		C	B,D	A		C	B,D	A	
9	B	C	A	D	B	C	A	D	B	C	A	D	B	C	A	D
10	A	B	D	C	A	B	D	C	A	B	D	C	A	B	D	C
11	B	C	A	D	B	C	A	D	B	C	A	D	B	C	A	D
12	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D	C
13	A			C	A			C	A			C	A			C
14	D	C		B	D	C		B	D	C		B	D	C		B
15	A	B	D	C	A	B	D	C	A	B	D	C	A	B	D	C
Candidate	Total	%	Transfer		Total	%	Transfer		Total	%	Transfer		Total	%	Transfer	
A	5	36%			5	33%			5	33%	0		6	43%	1	
B	6	43%			6	40%			6	40%	0		8	57%	2	
C	2	14%			3	20%			4	27%	1		0	0%	-4	
D	1	7%			1	7%			0	0%	-1		0	0%	0	
Votes Counted	14				15				15				14			
Inactive	0				0				0				1		1	
Total Ballots	15				15				15				15			
Overvote	1															
Undervote	0															
Current Active choice																
Eliminated Choice/ Skipped ranking																

\* I the case of this skipped choice, advancing to the next highest ranked continuing candidate results in the ballot being cast for the voter's last choice. I would think that this does not truly reflect the voter's intent. Should we consider a rule that prevents a vote being cast for a voter's last choice when all candidates are allowed to be ranked and a maximum numeric rank is given to a candidate?

Test Set 3	Skipped choice - Exhaust ballot. 15 ballots listed. 1st choice skipped (ballot 1). 2nd choice skipped (ballot 13). 3rd choice skipped (ballot 14).
Description round 0	Shows what a tabulator tape would report for totals of the 15 ballots. Only 1st choices would be reported thus 2nd thru 4th choices grayed out. Overvotes and undervotes are shown to account for votes not assigned to candidates. (0 overvote and 1 undervotes)
Description round 1	This would match round 0 if all ballots had valid 1st choice votes. Since 1st choice on ballot 1 is skipped, ballot 1 is eliminated and is omitted from further counting. A new count is determined. This round does not produce a winner and candidate D, having the least votes, will be eliminated.
Description round 2	A new count is determined after Candidate D is eliminated on ballot 14 and the 2nd choice, candidate C, is selected. There still is no winner and candidate C will now be eliminated, having the least votes.
Description round 3	A new count is determined after candidate C is eliminated on ballots 3, 13 and 14. Candidate B is selected on ballot 3, being the 2nd choice. Ballot 13 is eliminated as the 2nd choice is not voted. Ballot 14 is eliminated as the 3rd choice is not voted. Candidate B is the winner having more than 50% of the total remaining votes cast.

Ballot advanced to next highest ranked continuing candidate

Ballot #	Tabulated designated 1st choice-Round 0)				Round 1				Round 2				Round 3			
	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice
1		B	C			B	C			B	C			B	C	
2	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D	C
3	C	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D
4	A	C	B	D	A	C	B	D	A	C	B	D	A	C	B	D
5	B	C	A	D	B	C	A	D	B	C	A	D	B	C	A	D
6	A	C	B	D	A	C	B	D	A	C	B	D	A	C	B	D
7	B	A	C	D	B	A	C	D	B	A	C	D	B	A	C	D
8	A	B	C		A	B	C		A	B	C		A	B	C	
9	B	C	A	D	B	C	A	D	B	C	A	D	B	C	A	D
10	A	B	D	C	A	B	D	C	A	B	D	C	A	B	D	C
11	B	C	A	D	B	C	A	D	B	C	A	D	B	C	A	D
12	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D	C
13	C			B	C			B	C			B	C			B
14	D	C		B	D	C		B	D	C		B	D	C		B
15	A	B	D	C	A	B	D	C	A	B	D	C	A	B	D	C
Candidate	Total	%	Transfer		Total	%	Transfer		Total	%	Transfer		Total	%	Transfer	
A	5	36%			5	36%			5	36%	0		5	42%	0	
B	6	43%			6	43%			6	43%	0		7	58%	1	
C	2	14%			2	14%			3	21%	1		0	0%	-3	
D	1	7%			1	7%			0	0%	-1		0	0%	0	
Votes Counted	14				14				14				12			
Inactive	0				1				1		0		3		2	
Total Ballots	15				15				15				15			
Overvote	0															
Undervote	1															
Current Active choice																
Eliminated Choice/ Skipped ranking																

Test Set 4	Skipped choice - Skip to next continuing candidate. 15 ballots listed. No 3rd or 4th choice on ballot 1. No 4th choice ballot 8. No 2nd or 3rd choice ballot 13. No 3rd choice ballot 14.
Description round 0	Shows what a tabulator tape would report for totals of the 15 ballots. Only 1st choices would be reported thus 2nd thru 4th choices grayed out. Overvotes and undervotes are shown to account for votes not assigned to candidates. (0 overvotes and 0 undervotes)
Description round 1	This matches round 0 since all ballots have valid 1st choice votes. This round does not produce a winner and candidate D, having the least votes, will be eliminated.
Description round 2	A new candidate count is determined after Candidate D is eliminated on ballot 14 and the 2nd choice, candidate C, is selected. There still is no winner and candidate C will now be eliminated, having the least votes. Skipped choices are advanced to next highest ranked continuing candidate.*
Description round 3	A new count is determined after candidate C is eliminated on ballots 3, 13 and 14. Candidate B is selected on ballot 3, being the 2nd choice. Candidate B, the 4th choice on ballot 13, is selected since the 2nd and 3rd choices are omitted. The 3rd choice in ballot 14 was not voted so candidate B, the 4th choice, is selected. Candidate B is the winner having more than 50% of the total remaining votes cast.

Ballot advanced to next highest ranked continuing candidate																
Ballot #	Tabulated designated 1st choice-Round 0)				Round 1				Round 2				Round 3			
	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice
1	B	C			B	C			B	C			B	C		
2	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D	C
3	C	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D
4	A	C	B	D	A	C	B	D	A	C	B	D	A	C	B	D
5	B	C	A	D	B	C	A	D	B	C	A	D	B	C	A	D
6	A	C	B	D	A	C	B	D	A	C	B	D	A	C	B	D
7	B	A	C	D	B	A	C	D	B	A	C	D	B	A	C	D
8	A	B	C		A	B	C		A	B	C		A	B	C	
9	B	C	A	D	B	C	A	D	B	C	A	D	B	C	A	D
10	A	B	D	C	A	B	D	C	A	B	D	C	A	B	D	C
11	B	C	A	D	B	C	A	D	B	C	A	D	B	C	A	D
12	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D	C
13	C			B	C			B	C			B	C			B
14	D	C		B	D	C		B	D	C		B	D	C		B
15	A	B	D	C	A	B	D	C	A	B	D	C	A	B	D	C
Candidate	Total	%	Transfer		Total	%	Transfer		Total	%	Transfer		Total	%	Transfer	
A	5	33%			5	33%			5	33%	0		5	33%	0	
B	7	47%			7	47%			7	47%	0		10	67%	3	
C	2	13%			2	13%			3	20%	1		0	0%	-3	
D	1	7%			1	7%			0	0%	-1		0	0%	0	
Votes Counted	15				15				15				15			
Inactive	0				0				0				0			
Total Ballots	15				15				15				15			
Overvote	0															
Undervote	0															
Current Active choice																
Eliminated Choice/ Skipped ranking																

\* I the case of these skipped choices, advancing to the next highest ranked continuing candidate results in the ballots being cast for the voter's last choice. I would think that this does not truly reflect the voter's intent. Should we consider a rule that prevents a vote being cast for a voter's last choice when all candidates are allowed to be ranked and a maximum numeric rank is given to a candidate?

Test Set 5	Skipped choice - Exhaust if 2 successive skipped choices. Otherwise skip to next continuing candidate. 15 ballots listed. No 1st choice on ballot 1. No 4th choice ballot 8. No 2nd or 3rd choice ballot 13. No 3rd choice ballot 14. Single skipped choices are advanced to next highest ranked continuing candidate.*
Description round 0	Shows what a tabulator tape would report for totals of the 15 ballots. Only 1st choices would be reported thus 2nd thru 4th choices grayed out. Overvotes and undervotes are shown to account for votes not assigned to candidates. (0 overvotes and 1 undervote)
Description round 1	This would match round 0 if all ballots had valid 1st choice votes. Since 1st choice on ballot 1 is skipped, candidate B the 2nd choice is selected and a new count determined. This round does not produce a winner and candidate D, having the least votes, will be eliminated.
Description round 2	A new candidate count is determined after Candidate D is eliminated on ballot 14 and the 2nd choice, candidate C, is selected. There still is no winner and candidate C will now be eliminated, having the least votes.
Description round 3	A new count is determined after candidate C is eliminated on ballots 3, 13 and 14. Ballot 13 is eliminated since the 2nd and 3rd choices are consecutive omissions. The 3rd choice in ballot 14 was not voted so candidate B, the 4th choice, is selected. Candidate B is the winner having more than 50% of the total remaining votes cast.

Skipped choice_ Exhaust if consecutive skips					Ballot advanced to next highest ranked continuing candidate											
Ballot #	Tabulated designated 1st choice-Round 0)				Round 1				Round 2				Round 3			
	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice
1		B	C			B	C			B	C			B	C	
2	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D	C
3	C	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D
4	A	C	B	D	A	C	B	D	A	C	B	D	A	C	B	D
5	B	C	A	D	B	C	A	D	B	C	A	D	B	C	A	D
6	A	C	B	D	A	C	B	D	A	C	B	D	A	C	B	D
7	B	A	C	D	B	A	C	D	B	A	C	D	B	A	C	D
8	A	B	C		A	B	C		A	B	C		A	B	C	
9	B	C	A	D	B	C	A	D	B	C	A	D	B	C	A	D
10	A	B	D	C	A	B	D	C	A	B	D	C	A	B	D	C
11	B	C	A	D	B	C	A	D	B	C	A	D	B	C	A	D
12	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D	C
13	C			B	C			B	C			B	C			B
14	D	C		B	D	C		B	D	C		B	D	C		B
15	A	B	D	C	A	B	D	C	A	B	D	C	A	B	D	C
Candidate	Total	%	Transfer		Total	%	Transfer		Total	%	Transfer		Total	%	Transfer	
A	5	36%			5	33%			5	33%	0		5	36%	0	
B	6	43%			7	47%			7	47%	0		9	64%	2	
C	2	14%			2	13%			3	20%	1		0	0%	-3	
D	1	7%			1	7%			0	0%	-1		0	0%	0	
Votes Counted	14				15				15				14			
Inactive	0				0				0		0		1		1	
Total Ballots	15				15				15				15			
Overvote	0															
Undervote	1															
Current Active choice																
Eliminated Choice/ Skipped ranking																

\* I the case of this skipped choice, advancing to the next highest ranked continuing candidate results in the ballot being cast for the voter's last choice. I would think that this does not truly reflect the voter's intent. Should we consider a rule that prevents a vote being cast for a voter's last choice when all candidates are allowed to be ranked and a maximum numeric rank is given to a candidate?

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Test Set 7	Duplicate choice - Skip to next continuing candidate. 15 ballots listed. 2nd choice a duplicate of 1st choice on ballot 1. 3rd choice a duplicate of 1st choice on ballot 2. 3rd choice a duplicate of 2nd choice on ballot 14.
Description round 0	Shows what a tabulator tape would report for totals of the 15 ballots. Only 1st choices would be reported thus 2nd thru 4th choices grayed out. Overvotes and undervotes are shown to account for votes not assigned to candidates. (0 overvotes and 0 undervotes)
Description round 1	This matches round 0 since all ballots have valid 1st choice votes. This round does not produce a winner and candidate D, having the least votes, will be eliminated.
Description round 2	A new count is determined after Candidate D is eliminated on ballots 1 and 14. Candidate A, the 3rd choice, is selected on ballot 1 as the 2nd choice is skipped being a duplicate of the eliminated 1st choice. On ballot 14 the 2nd choice, candidate B, is selected. There still is no winner and candidate C will now be eliminated, having the least votes.
Description round 3	A new count is determined after candidate C is eliminated on ballots 2, 3, 11 and 13. Candidate A is selected on ballot 2, being the 4th choice after skipping eliminated 2nd choice and the duplicate 3rd choice. Candidate B is selected on ballots 3 and 13, being the 2nd choice on both. Candidate A is selected on ballot 12, being the 4th choice after skipping the eliminated 2nd choice and the duplicate 3rd choice. Candidate A is the winner having more than 50% of the total remaining votes cast.

Ballot advanced to next highest ranked continuing candidate																
Ballot #	Tabulated designated 1st choice-Round 0)				Round 1				Round 2				Round 3			
	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice	1st Choice	2nd Choice	3rd Choice	4th Choice
1	D	D	A		D	D	A		D	D	A		D	D	A	
2	C	D	C	A	C	D	C	A	C	D	C	A	C	D	C	A
3	C	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D
4	A	C	B	D	A	C	B	D	A	C	B	D	A	C	B	D
5	B	C	A	D	B	C	A	D	B	C	A	D	B	C	A	D
6	A	C	B	D	A	C	B	D	A	C	B	D	A	C	B	D
7	B	A	C	D	B	A	C	D	B	A	C	D	B	A	C	D
8	A	B	C		A	B	C		A	B	C		A	B	C	
9	B	C	A	D	B	C	A	D	B	C	A	D	B	C	A	D
10	A	B	D	C	A	B	D	C	A	B	D	C	A	B	D	C
11	C	D	D	A	C	D	D	A	C	D	D	A	C	D	D	A
12	B	A	D	C	B	A	D	C	B	A	D	C	B	A	D	C
13	C	B			C	B			C	B			C	B		
14	D	B	A		D	B	A		D	B	A		D	B	A	
15	A	B	D	C	A	B	D	C	A	B	D	C	A	B	D	C
Candidate	Total	%	Transfer		Total	%	Transfer		Total	%	Transfer		Total	%	Transfer	
A	5	33%			5	33%			6	40%	1		8	53%	2	
B	4	27%			4	27%			5	33%	1		7	47%	2	
C	4	27%			4	27%			4	27%	0		0	0%	-4	
D	2	13%			2	13%			0	0%	-2		0	0%	0	
Votes Counted	15				15				15				15			
Inactive	0								0		0		0		0	
Total Ballots	15				15				15				15			
Overvote	0															
Undervote	0															
Current Active choice																
Eliminated Choice/ Skipped ranking																