

Expected Outcome RCV Test Sets Multi-Winner

The tabs in the spreadsheet define the Test Conditions and Expected Outcomes for Accuracy Testing or Acceptance Testing for each named Ranked Choice Voting Tabulation Variant.

URCVT v.1.2.0 140-NY Expected Outcome RCV Test Sets Multi-Winner v.1.0.0 document is solely for use in the State of New York. This document can be expanded or updated as is necessary or required. Any recommendations listed in this document should not supersede user jurisdiction procedures or other controlling governance entities.

URCVT v.1.2.0 140-NY Expected Outcome RCV Test Sets Multi-Winner v.1.0.0

URCVT v.1.2.0, 140-NY *Expected Outcome RCV Test Sets Multi-Winner* v.1.0.0. Document is created solely for the New York State Board of Elections and is considered v.1.0.0 because the document is new for this system. 4/27/2021

	eat test data using w	whole # threshold											_																			
Multi-winner with whole number threshold	This test set uses fractions ignored	es a version of the ed. Surplus fraction	Weighted Inclus s are rounded d	ve Gregory Meth own at the fourth	od (WIGM) in which decimal place and	h the threshold is ca truncated.	lculated on a w	hole number b	asis. ((Total ballots in	round 1/Number of sea	ats+1)+1) and																					
Description Round 0	Shows what a ta votes not assign example demons	abulator tape wou ned to candidates (nstrates, candidate	ld report for tota 2 undervotes). s may gain votes	ls of the 30 ballo Vhile candidate in the RCV tabu	ts. Only 1st choice C has 8 1st choice v ation that were no	would be reported otes, enough to be e t reflected in the stra	thus 2nd thru 6 lected, some ju ight 1st choice	th choices are risdictions cho tabulation.	rayed out. Overvote ose to run the RCV tal	s and undervotes are sho pulation before declarin	own to accou ng winners. As	nt for this																				
Description Round 1	Employing the ru	ule allowing a max s elected with 9 vo	imum of one ski tes. a surplus of	pped vote, ballo 1 vote.	9 is counted for C	and ballot 10 is "exh	austed" and co	unted as per m	nently "inactive." A r	new count is determined	d. In this roun	d,	1																			
Description Round 2	2 C's surplus is divi redistributed to	vided by the numb these candidates	er of votes for C and a new coun	to calculate the is determined. I	'surplus fraction" (: lo new candidates	SF) to be distributed are elected so candi	to each next co late F, having tl	ntinuing candie ne fewest vote	late on C's ballots. Th , will be eliminated.	is yields a SF value of .1:	111 which is		ĺ																			
Description Round 3	Candidate D 's ba candidate F. On fewest number of	ballots are counted ballot 16, D is follo of votes, will be el	for the next cor owed by 2 skipp iminated.	tinuing candidat ed choices and is	e on each. On ballo thus exhausted an	nt 1, the 2nd choice (d counted as "inactiv	candidate C) is s e." A new coun	elected instea t is then deteri	d. On ballot 2, D's trai nined, and no new ca	nsfer value from C's surp ndidate is elected. Cand	plus is counte didate F, havir	d for ng the																				
Description Round 4	Candidate F 's ba A received a full number of votes	allots are counted I vote from candida s, will be eliminate	for the next cor ate F from ballot d.	tinuing candidat 6 and the surplu	e on each. Candida s transfer value fro	te B received full vot m ballot 2. A new co	es from candida unt is then dete	ite F from ballo ermined, and n	ts 4 and 12 and the s o new candidate is ele	urplus transfer value fro ected. Candidate E, havi	om ballot 9. Ca ing the fewest	andidate t																				
Description Round 5	Candidate E's ba 3 and 18. Candid threshold.	allots are counted date B received ful	for the next con I votes from can	inuing candidate didate E's ballot	on each. Candidat from ballots 24 and	e A received full vot 27 and the surplus	s from candida ransfer value fr	te E's ballots fr om ballot 14. (om ballots 1, 17 and andidates A and B an	21 and the surplus trans e elected with vote tota	sfer value fron Ils exceeding t	n ballots the																				
Description Round 6	This round is opt surpluses for A 8 surplus fraction i thus, all surplus t	tional. Jurisdiction & B are calculated is then multiplied transfers are exha	s wishing to sho by subtracting t by the transfer usted ballots an	w all winning car the threshold from alue of the vote d are counted as	didates as receivin n their respective v on each respective inactive.	g the threshold, so ti ote totals and the su ballot and transferr	nat none appea rplus fraction is ed to the next o	 to have more calculated by ontinuing cand 	votes than others, ma dividing the surpluses idate. In this case, the	ay do so by exercising th by the vote totals for ex ere are no remaining cor	his option. The each candidate ntinuing cand	e a. The idates																				
							How each b	allot counts in	each round with tota	is by round																						
								Kound U	Round 1Elect C		Kound 2	-Keaist Sur	plus from C,	, Elim D			Kound 3-	-Elim F		Kour	0 4Elim E	ко	na 5Elect A	& B				Kound 6	Redist Su	irplus from A	<u>& B</u>	
]							Vote		_	Total	Adjusted Total	Change from Prev		Vote	Change from Prev		Vot	Chang from Pr	e ev	Vote	Change from Prev					A Vote	djusted Vote	Change from Prev		Transfer
max skipped ranking =	3 seats	Ļ					Candidate	vote i otais	i otais	Surplus Surplus	s Fraction	0.0000	votes	Kound		Iotais	Round		10ta 7.11	1 1.111		10.3333	3.2222	elect	2.3333	0.225804	U.2258	1 otals	1 otals	-2.3333	-	0.025086 0.0250
	-1															6.0000	0.0000															
Elected if vote total >=	- threshold						В	5	5			5.0000	5.0000	0.0000		5.0000	0.0000		7.11	1 2.111		9.2222	2.1111	elect	1.2222	0.132528	0.1325	8.0003	8.0000	-1.2222	+	0.014721 0.0147
Elected if vote total >= T = int(V/(S+1)) + 1	threshold						B	5	5 9 elect	1.0000 0.1111	1 0.1111	5.0000 8.0001	5.0000	0.0000		5.0000 5.0000 8.0000	0.0000		7.11	1 2.111 0 0.000		9.2222	2.1111 0.0000	elect	1.2222	0.132528	0.1325	8.0003 8 8.0000 4	8.0000 8.0000	-1.2222		0.014721 0.0147
Elected if vote total >= T = int(V/(S+1)) + 1 T=	threshold 8.0000						B C D	5 8 2	5 9 elect 2	1.0000 0.11113	1 0.1111	5.0000 8.0001 2.1111	5.0000 8.0000 2.1111	0.0000	elim	5.0000 5.0000 8.0000 0.0000	0.0000 0.0000 -2.1111		7.11 8.00 0.00	1 2.111 0 0.000 0 0.000		9.2222 8.0000 0.0000	2.1111 0.0000 0.0000	elect	1.2222	0.132528	0.1325	8.0003 4 8.0000 4 0.0000 0	3.0000 3.0000 0.0000	-1.2222 0.0000 0.0000		0.014721 0.0147
Elected if vote total >= T = int(V/(S+1)) + 1 T= Adjusted Vote Totals		D					B C D E	5 8 2 4	5 elect 2 4	1.0000 0.11113	1 0.1111	5.0000 8.0001 2.1111 4.7777	5.0000 8.0000 2.1111 4.7777	0.0000 -1.0000 0.1111 0.7777	elim	5.0000 5.0000 8.0000 0.0000 5.7777	0.0000 0.0000 -2.1111 1.0000		7.11 8.00 0.00 5.77	1 2.111 0 0.000 0 0.000 7 0.000	2	. .	2.1111 0.0000 0.0000 -5.7777	elect	1.2222	0.132528	0.1325	8.0003 3 8.0000 3 0.0000 0 0.0000 0	3.0000 3.0000 0.0000 0.0000	-1.2222 0.0000 0.0000 0.0000		0.014721 0.0147
Elected if vote total >= T = int(V/(S+1)) + 1 T= Adjusted Vote Totals	-1 = threshold 8.0000						B C D E F	5 8 2 4 3	5 elect 2	1.0000 0.1111	1 0.1111	5.0000 8.0001 2.1111 4.7777 3.1111	5.0000 8.0000 2.1111 4.7777 3.1111	0.0000 -1.0000 0.1111 0.7777 0.1111	eim	5.0000 5.0000 8.0000 0.0000 5.7777 3.2222	0.0000 0.0000 -2.1111 1.0000 0.1111	elim	7.11 8.00 0.00 5.77 0.00	1 2.111 0 0.000 0 0.000 0 0.000 7 0.000 0 -3.222	2 2	0 9.2222 0 9.2000 0 0.0000 0 0.0000 0 0.0000	2.1111 0.0000 0.0000 -5.7777 0.0000	elect	1.2222	0.132528	0.1325	8.0003 8 8.0000 8 0.0000 9 0.0000 9 0.0000 9 0.0000 9	3.0000 3.0000 0.0000 0.0000	-1.2222 0.0000 0.0000 0.0000 0.0000		0.014721 0.0147
Elected if vote total >= T = int(V/(S+1)) + 1 T= Adjusted Vote Totals							B C D E F Valid	5 8 2 4 3 28	5 elect 9 elect 2	1.0000 0.11113	1 0.1111	5.0000 8.0001 2.1111 4.7777 3.1111 29.0000	5.0000 8.0000 2.1111 4.7777 3.1111 28.9999	0.0000 -1.0000 0.1111 0.7777 0.1111 -0.0001	elim	5.0000 5.0000 8.0000 0.0000 5.7777 3.2222 27.9999	0.0000 0.0000 -2.1111 1.0000 0.1111 -1.0000	elim	7.11 8.00 0.00 5.77 0.00 27.95	1 2.111 0 0.000 0 0.000 0 0.000 0 0.000 0 -3.222 09 0.000	2 C	2.1111 0.0000 0.0000 -5.7777 0.0000 -0.4444	elect	1.2222	0.132528	0.1325	8.0003 3 8.0000 3 0.0000 0 0.0000 0 0.0000 0 0.0000 0 24.0006 2	3.0000 3.0000 0.0000 0.0000 0.0000 4.0000	-1.2222 0.0000 0.0000 0.0000 0.0000 -3.5555		0.014721 0.0147 0.014721 0.0147 0.0147 0.014721 0.0147 0.014 0.01 0.01
Elected if vote total >= T = int(V/(S+1)) + 1 T= Adjusted Vote Totals	= threshold 8.0000 V=T						B C D E F Valid Inactive	5 8 2 4 3 28 28 2	5 elect 2	1.0000 0.1111	1 0.1111	5.0000 8.0001 2.1111 4.7777 3.1111 29.0000 1.0000	5.0000 8.0000 2.1111 4.7777 3.1111 28.9999 1.0000	0.0000 -1.0000 0.1111 0.7777 0.1111 -0.0001 0.0000	elim	5.000 5.000 8.000 0.000 5.7777 3.2222 27.9999 2.0000	0.0000 0.0000 -2.1111 1.0000 0.1111 -1.0000 1.0000	elim	7.11 8.00 0.00 5.77 0.00 27.99 2.00	1 2.111 0 0.000 0 0.000 7 0.000 0 -3.222 99 0.000 0 0.000	2 Control Cont	9.2222 8.0000 0.0000 0.0000 27.5555 2.4444	2.1111 0.0000 0.0000 -5.7777 0.0000 -0.4444 0.4444	elect	1.2222	0.132528	0.1325	8.0003 4 8.0000 4 0.0000 0 0.0000 0 0.0000 0 24.0006 2 5.9933 1	8.0000 8.0000 0.0000 0.0000 0.0000 4.0000 5.9993	-1.2222 0.0000 0.0000 0.0000 0.0000 -3.5555 3.5549		0.014721 0.0147 0.014 0.01 0.01
Elected if vote total >= T = int(V/(S+1)) + 1 T= Adjusted Vote Totals	= threshold						B C D E F Valid Inactive Residual	5 8 2 4 3 28 28 2	5 elect 2		1 0.1111	5.0000 8.0001 2.1111 4.7777 3.1111 29.0000 1.0000 0.0000	5.0000 8.0000 2.1111 4.7777 3.1111 28.9999 1.0000 0.0001	0.0000 -1.0000 0.1111 0.77777 0.1111 -0.0001 0.0000 0.0001	eim	5.000 5.000 8.0000 0.0000 5.7777 3.2222 27.9999 2.0000 0.0001	0.0000 0.0000 -2.1111 1.0000 0.1111 -1.0000 1.0000 0.0000	elim	7.11 8.00 0.00 5.77 0.00 27.99 2.00 0.00	1 2.111 1 2.111 0 0.000 0 0.000 7 0.000 7 0.000 -3.222 -3.222 99 0.000 0 0.000 1 0.000	1 1 2 1 3 1 4 1 5 1 6 1 7 1 8 1 9 1 10 1 11 1 12 1 13 1 14 1 15 1 16 1 17 1 18 1 19 1	9,2222 9,2222 8,0000 0,0000 0,0000 27,5555 2,4444 0,0001	2.1111 0.0000 -5.7777 0.0000 -0.4444 0.0000	elect	1.2222	0.132528	0.1325	8.0003 4 8.0000 4 0.0000 4 0.0000 4 0.0000 4 0.0000 4 0.0000 4 0.0000 4 0.0000 4 0.0000 4 0.0000 4 0.0000 4 0.0000 4 0.0000 4 0.0001 4	3.0000 3.0000 3.0000 0.0000 0.0000 0.0000 4.0000 5.9993 0.0007 0.0007	-1.2222 0.0000 0.0000 0.0000 0.0000 -3.5555 3.5549 0.0006		0.014721 0.0147
Elected if vote total >= T = int(V/(S+1)) + 1 T= Adjusted Vote Totals	= threshold						B C D E F Valid Inactive Residual Total	5 8 2 4 3 28 2 2 30	5 elect 2			5.0000 8.0001 2.1111 4.7777 3.1111 29.0000 1.0000 0.00000 30.0000	5.0000 8.0000 2.1111 4.7777 3.1111 28.9999 1.0000 0.0001 30.0000	0.0000 -1.0000 0.1111 0.7777 0.1111 -0.0001 0.0000 0.0000	elm	5.000 5.000 8.000 0.000 5.7777 3.2222 27.9999 2.0000 0.0001 30.0000	0.0000 0.0000 0.0000 -2.1111 1.0000 0.1111 -1.0000 1.0000 0.0000 0.0000	elim	7.11 8.00 0.00 5.77 0.00 2.795 2.00 0.00 0.00 3.0.00	1 2.111 1 2.111 0 0.000 0 0.000 0 0.000 0 0.000 0 -3.222 0 0.000 0 0.000 1 0.000 0 0.000	1	9.2222 9.2222 8.0000 0.0000 0.0000 27.5555 2.4444 0.0001 30.0000	2.1111 0.0000 -5.7777 0.0000 -0.4444 0.4444 0.0000	elect	1.2222	0.132528	0.1325	8.0003 1 8.0000 1 0.0000 1 0.0000 1 0.0000 1 0.0000 1 0.0000 1 0.0000 1 0.0000 1 0.0000 1 30.0000 3	3.0000 3.0000 0.0000 0.0000 4.0000 5.9993 .0007 0.0000	-1.2222 0.0000 0.0000 0.0000 0.0000 -3.5555 3.5549 0.0006 0.0000		0.014721 0.0147 1 0.0147

Vote Value

Round 2

Vote Value

Transfer Value Round 3 Vote Value

Transfer Value Round 4

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Α

4th Choice 5th Choice 6th Choice

F

E

1st Choice

Ballot #

1

2nd Choice

undervote

3rd Choice

С

Vote Value

Ballot # Round 0 Round 1

Transfer Value

Vote Value

Round 6

Transfer Value

Vote Value

Transfer Value

Transfer Value Round 5

2	С	D	F	A	В	E	2	С	С	1		С	0.88	89	D 0.1111	С	0.8889	F	0.1111	С	0.8889 A	0.1111	С	0.8889	A	0.1111		С	0.88	89	A 0.	.0861 inac	live 0.0250
3	С	E	A	D	В	F	3	С	С	1		С	0.88	89	E 0.1111	С	0.8889	E	0.1111	С	0.8889 E	0.1111	С	0.8889	A	0.1111		C	0.88	89	A 0.	.0861 inac	äve 0.0250
4	F	с	В	D	undervote	undervote	4	F	F	1		F	1.00	00		F	1.0000			F	В	1.0000	F		В	1		F			В 0.	.8675 inac	live 0.1325
5	В	undervote	undervote	undervote	undervote	A	5	В	В	1		В	1.00	00		В	1.0000			В	1.0000		В	1.0000				В	0.867	75 inz	octive 0.	.1325	
6	F	A	В	D	E	С	6	F	F	1		F	1.00	00		F	1.0000			F	A	1.0000	F		A	1		F			A 0.	.7742 inac	tive 0.2258
7	В	E	С	D	undervote	undervote	7	В	В	1		В	1.00	00		В	1.0000			В	1.0000		В	1.0000				В	0.867	75 inz	active 0.	.1325	
8	A	В	С	undervote	E	F	8	А	А	1		A	1.00	00		A	1.0000			A	1.0000		А	1.0000				А	0.774	42 ina	active 0.	.2258	
9	undervote	с	F	D	В	A	9	undervote	С	1		С	0.88	89	F 0.1111	С	0.8889	F	0.1111	С	0.8889 B	0.1111	С	0.8889	В	0.1111		С	0.88	,89	в 0.	.0964 inac	tive 0.0147
10	undervote	undervote	undervote	undervote	undervote	E	10	undervote	inactive	1		inactive	1.00	00		inactive	1.0000			inactive	1.0000		inactive	1.0000				inactive	1.00	.00			
11	С	E	D	undervote	undervote	undervote	11	С	С	1		С	0.88	89	E 0.1111	С	0.8889	E	0.1111	С	0.8889 E	0.1111	С	0.8889	inactive	0.1111		С	0.88	.89 ina	active 0.	.1111	
12	F	с	F	D	В	А	12	F	F	1		F	1.00	00		F	1.0000			F	В	1.0000	F		В	1		F			в 0.	.8675 inac	live 0.1325
13	С	E	undervote	undervote	F	A	13	с	с	1		С	0.88	89	E 0.1111	С	0.8889	E	0.1111	С	0.8889 E	0.1111	С	0.8889	inactive	0.1111		С	0.88	89 ina	active 0.	.1111	
14	С	E	В	undervote	F	D	14	С	С	1		С	0.88	89	E 0.1111	С	0.8889	E	0.1111	С	0.8889 E	0.1111	С	0.8889	В	0.1111		С	0.88	89	в 0.	.0964 inac	tive 0.0147
15	A	В	D	C	F	E	15	A	A	1		A	1.00	00		A	1.0000			A	1.0000		A	1.0000				A	0.774	42 ina	active 0.	.2258	
16	D	undervote	undervote	E	F	А	16	D	D	1		D	1.00	00		inactive	1.0000			inactive	1.0000		inactive	1.0000				inactive	1.00	00			
17	E	D	F	А	В	С	17	E	E	1		E	1.00	00		E	1.0000			E	1.0000		E		A	1		E			A 0.	.7742 inac	äve 0.2258
18	С	E	A	D	В	F	18	С	С	1		С	0.88	89	E 0.1111	С	0.8889	E	0.1111	С	0.8889 E	0.1111	С	0.8889	A	0.1111		С	0.88	89	A 0.	.0861 inac	ůve 0.0250
19	A	С	В	D	undervote	undervote	19	А	А	1		A	1.00	00		А	1.0000			A	1.0000		А	1.0000				А	0.774	42 ina	active 0.	.2258	
20	В	undervote	undervote	undervote	undervote	A	20	В	В	1		В	1.00	00		В	1.0000			В	1.0000		В	1.0000				В	0.867	75 ina	active 0.	.1325	
21	E	А	В	D	F	С	21	E	E	1		E	1.00	00		E	1.0000			E	1.0000		E		A	1		E			A 0.	.7742 inac	dve 0.2258
22	В	E	С	D	undervote	undervote	22	В	В	1		В	1.00	00		В	1.0000			В	1.0000		В	1.0000				В	0.867	75 ina	active 0.	.1325	
23	A	В	С	undervote	E	F	23	А	A	1		A	1.00	00		A	1.0000			A	1.0000		А	1.0000				A	0.774	42 ina	active 0.	.2258	
24	E	с	F	D	В	A	24	E	E	1		E	1.00	00		E	1.0000			E	1.0000		E		В	1		E			в 0.	.8675 inac	ive 0.1325
25	A	undervote	undervote	undervote	undervote	E	25	А	A	1		A	1.00	00		A	1.0000			A	1.0000		А	1.0000				A	0.774	42 ina	active 0.	.2258	
26	С	E	D	undervote	undervote	undervote	26	С	С	1		С	0.88	89	E 0.1111	С	0.8889	E	0.1111	С	0.8889 E	0.1111	С	0.8889	inactive	0.1111		С	0.88	89 ina	active 0.	.1111	
27	E	с	F	D	В	А	27	E	E	1		E	1.00	00		E	1.0000			E	1.0000		E		В	1		E			в 0.	.8675 inac	live 0.1325
28	С	E	undervote	undervote	F	A	28	С	С	1		С	0.88	89	E 0.1111	С	0.8889	E	0.1111	С	0.8889 E	0.1111	С	0.8889	inactive	0.1111		С	0.88	89 ina	active 0.	1111	
29	В	С	E	undervote	F	D	29	В	В	1		В	1.00	00		В	1.0000			В	1.0000		В	1.0000				В	0.867	75 ina	active 0.	1325	
30	A	В	D	С	F	E	30	A	A	1		A	1.00	00		A	1.0000			A	1.0000		A	1.0000				A	0.774	12 ina	active 0.	.2258	

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Tabulation of mult-seat test data using fractional threshold

Multi-winner with fractional surplus	This test set uses a version of the Weighted Inclusive Gregory Method (WIGM) in which the threshold is calculated on a fractional basis to four (4) decimal places. ((Total ballots in round 1/Number of seats+1)+.0001) Surplus fractions are rounded down at the fourth decimal and truncated.
Description Round 0	Shows what a tabulator tape would report for totals of the 30 ballots. Only 1st choices would be reported thus 2nd thru 6th choices grayed out. Overvotes and undervotes are shown to account for votes not assigned to candidates. (2 undervotes)
Description Round 1	Employing the rule allowing a maximum of one skipped vote, ballot 9 is counted for C and ballot 10 is "exhausted" and counted as permanently "inactive." A new count is determined. This round does not produce a winner and candidate D, having the fewest votes, will be eliminated.
Description Round 2	Candidate D's ballots are counted for the next continuing candidate on each. On ballot 1, the 2nd choice (candidate C) is selected instead. On ballot 16, D is followed by 2 skipped choices and is thus exhausted and counted as "inactive." A new count is then determined. Candidate C, having 8 votes is elected with a surplus of .7499.
Description Round 3	C's surplus is divided by the number of votes for C to calculate the "surplus fraction" (SF) to be distributed to each next continuing candidate on C's ballots. This yields a SF value of () (0937 which is redistributed to these candidates and a new count is determined. No new candidates are elected so candidate F, having the fewest votes, will be eliminated.
Description Round 4	A new candidate count is determined after Candidate F is eliminated on ballots 4, 6, 9 and 12. Ballots 4 and 12 are counted for B with a transfer value of 1 each. Ballot 9 is counted for B with a transfer value of .0937. Ballot 6 is counted for A with a transfer value of 1. The round does not produce a winner and candidate E, with the fewest votes, will be eliminated.
Description Round 5	Candidate E's ballots are counted, at their "transfer value," for the next continuing candidate on each. Ballots 17.17 and 21 are counted for A with a transfer value of 1 each. Ballots 1, 3 and 18 are counted for A with a transfer value of .0937 each. Ballots 14, 24 and 27 are counted for B with a transfer value of 1 each. Ballots 11,13, 26 and 28 are exhausted and counted as inactive with a transfer value of .0937 each. Candidates A and B are elected with vote totals exceeding the threshold.
Description Round 6	This round is optional. Jurisdictions wishing to show all winning candidates as receiving the threshold, so that none appear to have more votes than others, may do so by exercising this option. The surpluses for A & B are calculated by subtracting the threshold from their respective vote totals and the surplus fraction is calculated by dividing the surpluses by the vote totals for each candidate. The surplus fraction is then multiplied by the transfer value of the vote on each respective ballot and transferred to the next continuing candidates thus, all surplus transfers are exhausted ballots and are counted as i mactive.

7.2501

Parameters: electing 3 seats max skipped ranking =1 Elected if Vote Total >= threshold

 T=(V/(S+1)+n, 4)

 0<n<1</td>

 Adjusted Vote Totals

= 0.0001

	1st Choice only	Round	LElim D	Round 2	Elect C		Ro	und 3Redist	Surplus fro	om C, Elim F				Round	4Elim E			Round 5-	-Elect A & B				I	Round 6-Redi	stribute A &	B Surpluses		
Candidate		Vote Total		Vote Total		Surplus	Surplus	Fraction	Round 3	Change	Vote Total		Vote Total	Adjusted Vote Total	Change		Vote Total	Adjusted Vote Total	Change		Surplus	Surplus	Fraction	Transfe	r Value	Vote Total	Adjusted Vote Total	Change
A	D	0		0					0	0.0000	6.0000		6.0000	7.0000	1.0000		7.0000	10.2811	3.2811	Elec	3.0310	0.294813	0.2948	0.027623	0.0276	10.2811	7.2501	-3.0310
в	3	3		3					,	0.0000	5.0000		5.0000	7.0937	2.0937		7.0957	10.0957	5.0000	Elec	2.0450	0.281720	0.2817	0.020555	0.0205	10.0557	7.2301	-2.8450
C	0	,		•	elect	0.7455	0.095758	0.093	°	-0.7490	7.2304		7.2304	7.2501	-0.0005		7.2301	7.2301	0.0000	,						7.2501	7.2501	0.0000
U	2	2	eim	0					U		U		0.0000	0.0000	0.0000		0.0000	0.0000	0.0000	,						0.0000	0.0000	0.0000
E	D	0		0					0	0.0559	0.0555		0.0559	0.0559	0.0000	eim	0.0559	0.0000	-0.0555							0.0000	0.0000	0.0000
F	3	3		3					3	0.0937	3.0937	eim	3.0937	0.0000	-3.0937		0.0000	0.0000	0.0000							0.0000	0.0000	0.0000
valid	28	29		28					28	0.0000	28.0000		28.0000	27.9997	-0.0003		27.9997	27.6249	-0.3748	5						27.6249	21.7503	-5.8740
Inactive	2	1		1					1	0	1.0000		1.0000	1.0000	0.0000		1.0000	1.3748	0.3748	s						1.3748	7.2489	5.8741
Residual														0.0003	0.0003		0.0003	0.0003	0.0000	,						0.0003	0.0008	0.0005

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							Г	rotai	30	30		29				29	0.0000	29.0000		29.0000	29.0000	0.0000	1 1	29.0000	29.0000	0.0000				1			29.0000 2	29.0000	0.0000	
CVRs																																				
							<u> </u>				Original		Original				Unginal				Unginal				Unginal											
Ballot #	1st Choice	and Choice	ard Choice	Ath Choice	5th Choice	6th Choice		Rallot #	Round 0	Round 1	Vote Value	Round 2	Vote Value			Round 2	Vote Value	+	Transfer	Round 4	Vote Value	+	Transfer	Round 5	Vote Value	+ Tr	ansfer			Pc	ound 6	Original	+ T	Transfer	+	Transfer
1	D	undervote	C	E	F	A		Lanot #	D	D	1	C C	1		-	-	0.9063		0.0937	C	0.9063	c	0.0937	C C	0.9063 A	,	0.0937 0.	.066100	0.0661	C		0.9063	•	0.0001	lacuve	0.0276
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-	-	5		í.	5	c		-		-	-	-	-			-	-			-	1.0000		0.0000	î.	1.0000		0.0000			<u> </u>		0.7052			det re	0.0276
3	L	E	A	U	в	r		3	c	L	1	C	1		C	-	0.9063		0.0937	C	0.9063	c	0.0937	L	0.9063 P		0.0937 0.	.066100	0.0661	C		0.9063	4	0.0661	acuve	
	F	L	в	U	undervote	undervote		4	F	r	1	F	1				1			в	1.0000		0.0000	в	1.0000		0.0000			в		0.7183	,		acuve	0.2817
5	в	undervote	undervote	undervote	undervote	А		2	в	в	1	в	1		1	8	1			в	1.0000		0.0000	в	1.0000		0.0000			в		0.7183	,	1	active	0.2817
6	F	A	в	D	E	L.		0	F	r	1	r	1				1			А	1.0000		0.0000	A	1.0000		0.0000			А		0.7052	4		lacuve	0.2948
7	В	E	с	D	undervote	undervote		7	В	В	1	В	1		E	В	1			В	1.0000		0.0000	В	1.0000		0.0000			В		0.7183	3	Ir	nactive	0.2817
8	A	В	с	undervote	E	F		8	A	A	1	A	1		4	Ą	1			A	1.0000		0.0000	A	1.0000		0.0000			А		0.7052	4		nactive	0.2948
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9	undervote	с	F	D	В	А		9	Inactive	с	1	с	1		C	2	0.9063	F	0.0937	с	0.9063	В	0.0937	С	0.9063 E		0.0937 0.	.067400	0.0674	С		0.9063	3	0.0674 lr	hactive	0.0263
10	undervote	undervote	undervote	undervote	undervote	E		10	Inactive	Inactive	1		1				1				1.0000		0.0000		1.0000		0.0000					1.0000				
		-							0								0.0000	-	0.0007		0.0000	-	0.0007		0.0000							0.0000		0.0007		
11	L	L.	D	undervote	undervote	undervote		11	L		1	L.	1			-	0.9063	-	0.0937	L.	0.9063	5	0.0937	L.	0.9063	lactive	0.0937			C.		0.9063	nactive	0.0937		
12	F	с	F	D	В	A		12	F	F	1	F	1		F	-	1			В	1.0000		0.0000	В	1.0000		0.0000			В		0.7183	3	Ir	nactive	0.2817
13	с	E	undervote	undervote	F	A		13	с	с	1	с	1			C	0.9063	E	0.0937	С	0.9063	E	0.0937	С	0.9063	nactive	0.0937			с		0.9063	nactive	0.0937		
14	E	С	В	undervote	F	D		14	E	E	1	E	1		E	1	1			E	1.0000		0.0000	В	1.0000		0.0000			в		0.7183	3	Ir	hactive	0.2817
15	A	В	D	С	F	E		15	A	A	1	A	1		1	4	1			A	1.0000		0.0000	A	1.0000		0.0000			A		0.7052	4	li I	nactive	0.2948
16	0	undoruoto	undonunto	c	c	•		16	D	0	1	Inactivo	1			pactivo	1			Inactivo	1 0000		0.0000	Inactivo	1 0000		0.0000				octivo	1 0000	pactivo			
10	5	undervote	undervote	-		î		10	0	5	-	macuve	1			nactive	1			mactive	1.0000		0.0000	mactive	1.0000		0.0000				active	1.0000	inactive			
17	E	D	F	A	В	с		17	E	E	1	E	1		E		1			E	1.0000		0.0000	A	1.0000		0.0000			А		0.7052	A	I	hactive	0.2948
18	с	E	A	D	В	F		18	С	С	1	С	1		C	2	0.9063	E	0.0937	С	0.9063	E	0.0937	С	0.9063 A		0.0937 0.	.066100	0.0661	С		0.9063	4	0.0661 Ir	nactive	0.0276
19	A	с	в	D	undervote	undervote		19	Α	А	1	A	1		4	A	1			A	1.0000		0.0000	А	1.0000		0.0000			А		0.7052	4	1	hactive	0.2948
20	В	undervote	undervote	undervote	undervote	A		20	В	В	1	В	1		E	В	1			В	1.0000		0.0000	В	1.0000		0.0000			В		0.7183	3	Ir	nactive	0.2817
21	E	A	в	D	F	с		21	E	E	1	E	1	 	6		1			E	1.0000		0.0000	A	1.0000		0.0000			A		0.7052	4	-	nactive	0.2948
22	В	E	с	D	undervote	undervote		22	В	в	1	в	1		ė	в	1			в	1.0000		0.0000	в	1.0000		0.0000			в		0.7183	3		hactive	0.2817
23	A	В	с	undervote	E	F		23	A	A	1	A	1		ŀ	A	1			A	1.0000		0.0000	A	1.0000		0.0000			А		0.7052	A	Ir	nactive	0.2948
24	E	с	F	D	В	A		24	E	E	1	E	1		6		1			E	1.0000		0.0000	В	1.0000		0.0000			В		0.7183	3	-	nactive	0.2817
	-					-																														
25	А	undervote	undervote	undervote	undervote	E		25	А	А	1	A	1		<i>,</i>	4	1			А	1.0000		0.0000	А	1.0000		0.0000			А		0.7052	4		hactive	0.2948
26	с	E	D	undervote	undervote	undervote		26	с	С	1	с	1		C	C	0.9063	E	0.0937	с	0.9063	E	0.0937	С	0.9063	nactive	0.0937			С		0.9063	nactive	0.0937		
27	E	С	F	D	В	A		27	E	E	1	E	1		E		1			E	1.0000		0.0000	В	1.0000		0.0000			В		0.7183	3	Ir	nactive	0.2817
30	C	F	undervete	undervoto	E	٨	\vdash	20	C	C	-	C				-	0.0063	-	0.0027	C	0.0062	F	0.0027	C	0.0062	active.	0.0027	\rightarrow		-		0.0062	nactive	0.0037		
28		-	undervote	undervote				28		C		<u> </u>	1				0.5003	-	0.0537		0.5003	-	0.0937	Č	0.9003	active	0.095/			Ľ		0.5003	nactive	0.0957		
29	В	с	E	undervote	F	D		29	В	В	1	В	1		E	В	1			В	1.0000		0.0000	В	1.0000		0.0000			В		0.7183	3	Ir	nactive	0.2817

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30 A B D C F E 30 A A 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1 A 1	J52 A Inactive	Inactive	0.2948
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Document Revision History

Date	Version	Description	Author
04/27/2021	1.0.0	Expected Outcomes RCV Test Sets Multi-Winner	Chris Hughes