Worksheet 2: More Voting Theory (IRV / RCV) Group Names: Solutions

1. A class is voting on what kind of ice cream to have. The choices are strawberry (S), chocolate (C), and vanilla (V). The students in the class ranked their ice cream choices and the following preference table was constructed.

# votes	2	5	1	2	2
1st choice	S	V	S	C	C
2nd choice	V	С	С	S	V
3rd choice	С	S	V	V	S

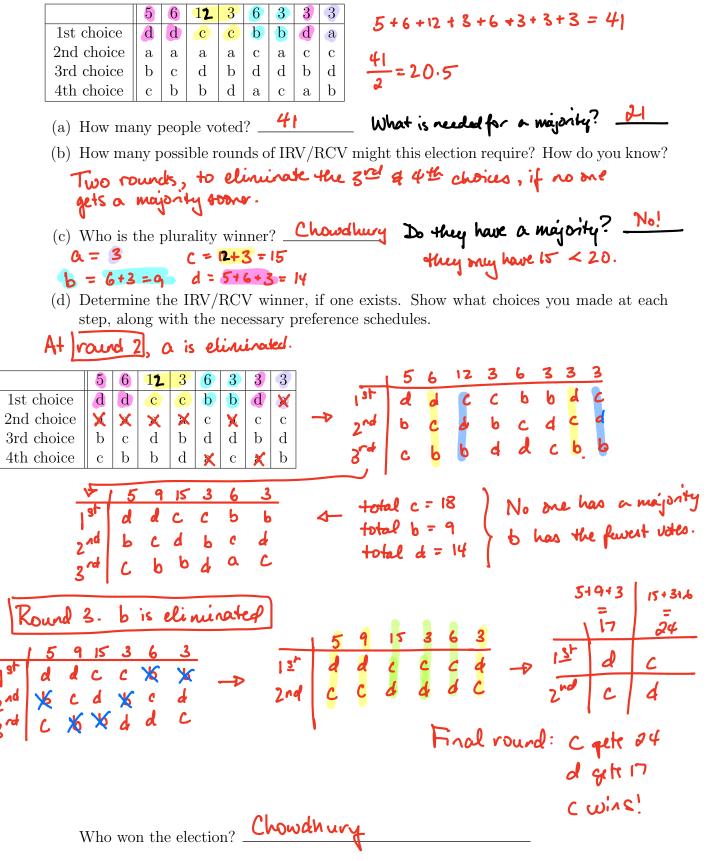
Find the winner under the Instant Runoff Voting (Ranked Choice Voting!) method, by answering the following:

	a) V	Nhie	h flε	avor	gets	eliminated in round 1?		
15t -total S= 211=3 choice: total V= 5						+ otal C = 2 + 2 = 4 S has the smallest $+ \text{ of } 1^{t}$ choice votes.		
# votes	2	5	1	2	2	1 st choice VVCCC P		
1st choice	X	V	X	C	C	2 nd choice C C V V V 12 V C		
2nd choice	V	С	С	X	V			
3rd choice	C	X	V	V	X			
((c) Who is the IRV (RCV) winner? Varilla							

(d) Do you think the IRV winner accurately represents the class's preference for ice cream? Explain your answer in a sentence or two.

Yes, because vanilla was prefered by a majority (7/12) of the students, even though it wasn't everyone's first choice.

2. Consider the following preference schedule for an election, with choices Abbot (a), Bingham (b), Chowdhury (c), and Dennison (d).



Som round Z, candidate c wins decisively, 21/33 = 64%