Review Worksheet (1.1 – 1.3)

1. Consider the following preference schedules for an election represented by the table below

First choice	C	B	A	D
Second choice	E	C	E	A
Third choice	B	E	C	B
Fourth choice	D	D	B	E
Fifth choice	A	A	D	C
Number of Voters	**5**	**4**	**7**	**6**

a) Who is the plurality winner?   a) _____

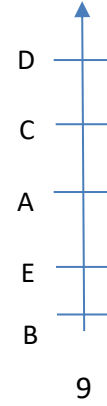b) Who is the winner by the runoff method?   b) _____
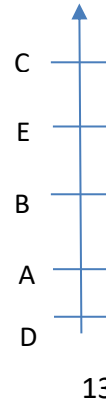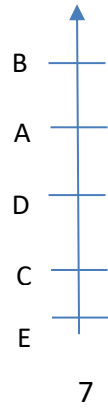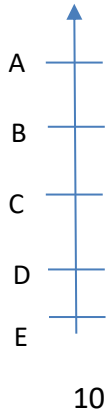
c) Who is the winner by the sequential runoff method?   c) _____

d) Who is the winner by the 5-4-3-2-1 Borda count method?   d) _____

e) Who is the Condorcet winner, if there is one?   e) _____

f) Based on the information above, who would YOU name as the winner of this election? Why?

2. The following are a set of preference schedules used to find a student to represent a school at a state student council meeting. Because of conflicts with other school events, a complete ranking of students is desired. The voters decide to hold a series of runoffs to determine a complete ranking.

A	B	C	D
B	A	E	C
C	D	B	A
D	C	A	E
E	E	D	B
10	7	13	9

a) Who is eliminated first?   a) _____

b) Which candidate, if any, receives the first place votes that had been awarded to the student who was eliminated first?   b) _____

c) Who is eliminated second?   c) _____

d) Which candidate receives the first place votes that had been awarded to the student who was eliminated second?   d) _____

e) Provide the **complete ranking** of students based on this series of runoff elections below:

1st place:

2nd place:

3rd place:

4th place:

5th place:

3. An election is being held to choose the president of the Math Advisory Club. There are 4 candidates: A, B, C, and D. Each of the 60 members of the club is asked to submit a ballot indicating his or her first, second, third, and fourth choices; ties are not allowed on individual ballots. The 60 ballots submitted are summarized in the table below:

First choice	B	D	C	A	A
Second choice	C	A	D	D	C
Third choice	A	C	A	C	D
Fourth choice	D	B	B	B	B
Number of Voters	**20**	**13**	**8**	**3**	**16**

a) Who is the plurality winner?   a) _____

b) Who is the winner by the runoff method?   b) _____

c) Who is the winner by the sequential runoff method?   c) _____

d) Who is the winner by the 4-3-2-1 Borda count method?   d) _____

e) Who is the Condorcet winner, if there is one?   e) _____

f) Based on the information above, who would YOU name as the winner of this election? Why?