$\qquad$

1. Consider the following ballots

|  |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
|  | Number of Voters (13) |  |  |  |
| Rank | $\mathbf{4}$ | $\mathbf{4}$ | $\mathbf{3}$ | $\mathbf{2}$ |
| First | A | B | C | D |
| Second | B | A | D | C |
| Third | C | C | A | A |
| Fourth | D | D | B | B |

(a) Draw the majority rule digraph for these votes and determine the Condorcet winner.
(b) Apply plurality voting.
(c) Apply sequential pairwise voting to the agenda $\mathrm{A}, \mathrm{B}, \mathrm{C}, \mathrm{D}$

