

Homework 4: Game Theory (2019)

Prepared by:

Joseph Malkevitch
Department of Mathematics
York College (CUNY)
Jamaica, New York 11451

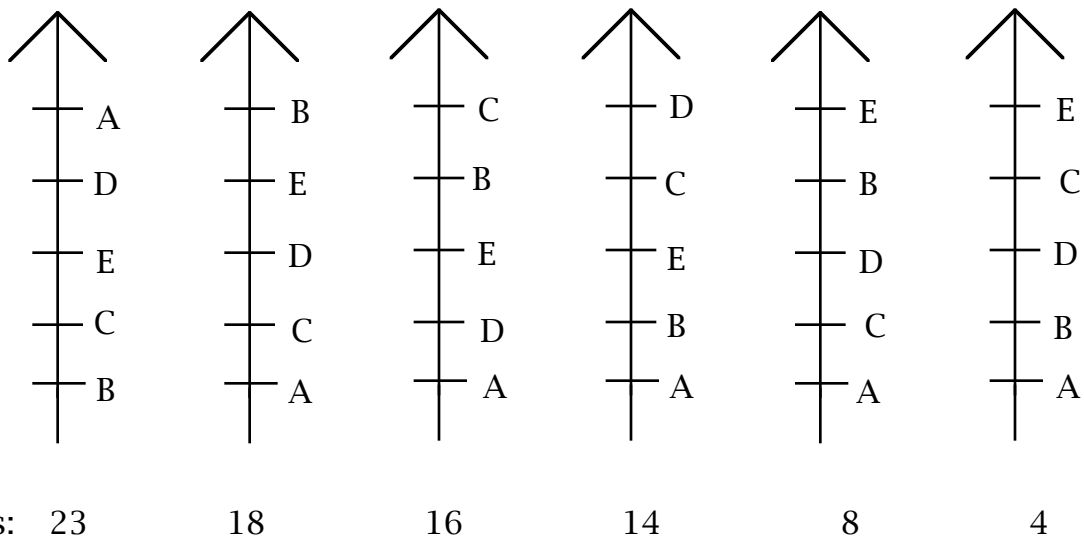
email:

malkevitch@york.cuny.edu

web page:

<http://york.cuny.edu/~malk>

1. Given the election below:



Determine the winner (if there is one) using the methods listed. Should ties occur break the ties in some reasonable manner that you explain. Note: more preferred options are listed towards the top - in the direction of the arrow.

a. Plurality

b. Condorcet

(As part of your solution draw a digraph which shows who beats whom in the two-way races. Use a directed edge from X to Y if X beats Y in a two-way contest.)

c. Borda count

(as part of your solution construct a pairwise preference matrix. - which shows votes in a two-way race between the different candidate pairs)

d. Sequential run-off

e (Standard) Run-off

f. Borda count sequential run-off

g. Coombs

h. Median approval (A ballot gives a point to each candidate who is at the median level or above.)