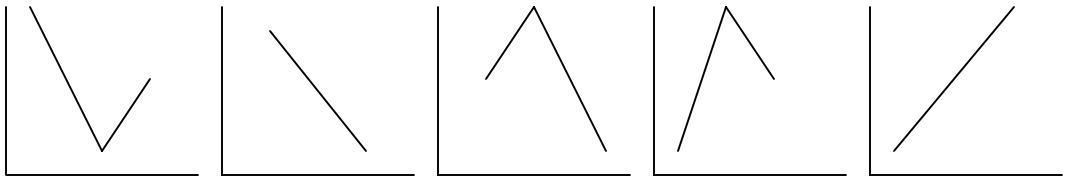
1. The following table represents the preferences for transit funding expressed by the city council members of Pleasantville:

Funding Level	**1st Ward**	**2nd Ward**	**3rd Ward**	**4th Ward**	**5th Ward**
Zero	1st Choice	1st Choice	2nd Choice	3rd Choice	3rd Choice
10 Million	3rd Choice	2nd Choice	1st Choice	1st Choice	2nd Choice
40 Million	2nd Choice	3rd Choice	3rd Choice	2nd Choice	1st Choice

a) Which funding level would be chosen if the city council engages in pair wise voting?

10 million

b) Graph each Ward's preferences.



c) Do any of the council members have multi-peaked preferences? If you have answered yes, then identify the council members who do have multi-peaked preferences. Provide support for your answer. If you feel that no members of the council have multi-peaked preferences, then provide support for your answer as well. Explain why multi-peaked preferences may exist in this scenario.

Yes – Ward 1;
Without a large, nice, far-reaching metro, the people in Ward 1 would have to take their cars to work. While they'd prefer to take their own cars, they'd take the transit (and pay for taxes) if it was large, nice, or far-reaching. If only 10 million was spent on the metro, people in Ward 1 would not use the metro, but they'd have to pay their tax share, so this is least desirable.

d) Find a way to change the preferences for one council member in order to generate vote cycling. Now, based on the new preferences you have created set the agenda for the council's meeting so that the "40 million" funding level passes. (Assume that the winner of the first scheduled vote must face the option that has not yet been voted on, and that the winner of the second vote is the plan the council chooses.)

Need to have 40 million beat 10 million – if Ward 2's preferences were
Zero – 1st
10 million – 3rd
40 million – 2nd

Cycling would occur.
The median voter would not work because Ward 1 (and with these changes) Ward 2 have multi-peaked preferences.