

Brookline Redistricting Contest!

“Brookline” has 8 Selectman, each representing 5 (equally populated) electoral precincts. The map gives the (8*5=40) precincts and estimates of the Democratic vote proportion in each. Your task is to draw 8 new districts (using the precincts as building blocks).

One class represents the Democrats; one represents the Republicans; and one, a nonpartisan group. Each group of three students in your class will draw a redistricting plan, and your class will then collectively choose one of these plans to compete with the other classes. Your class will also choose one student to give a 1 minute presentation to us all to argue for your plan. Mr. Paris will select the winning class based on who represents their class’ assigned interests the best.

Remember the criteria: partisan symmetry (maximize bias in your party’s direction; or minimize it if you’re nonpartisan); electoral responsiveness; equal Population (5 precincts per district); compactness; and preserving communities of interest.

The attached map includes precinct numbers and (predictions for the) Democratic vote proportions (the Republican proportion is 1 minus the Democratic proportion). To calculate bias (deviation from partisan symmetry) and responsiveness:

1. Draw your chosen districts on the map, using the precinct building blocks
2. On the worksheet, write the precinct numbers (and corresponding vote proportions) assigned to each district.
3. For each district, calculate the *district vote* (by averaging the 5 precinct votes)
4. Calculate the *average district vote* (by averaging the 8 district vote) and *seat proportion* (by determining the proportion of district votes greater than 0.5)
5. Plot this point on the seats-votes chart
6. Determine the *adjustment factor* by subtracting the average district vote from 0.5
7. Add the adjustment factor to each district vote to create a new district votes (check your work: the new average district vote should be 0.5)
8. Compute the new seat proportion (by determining the proportion of new district votes greater than 0.5).
9. Plot a second point on the seats-votes chart
10. Draw the seats-votes curve as a straight line through the two points on the chart
11. *Partisan Bias* is the deviation of the new seat proportion from 0.5; *Electoral Responsiveness* is the slope of the line

Seats-Votes Curve Calculations

	Dist 1		Dist 2		Dist 3		Dist 4		Dist 5		Dist 6		Dist 7		Dist 8	
	Pct	D%	Pct	D%	Pct	D%	Pct	D%	Pct	D%	Pct	D%	Pct	D%	Pct	D%
1																
2																
3																
4																
5																
District Vote (average the D%'s)																
New District Vote (adjust each district vote uniformly so the town average vote is 50%)																

Pct = Precinct Number, D % = Democratic vote proportion in the precinct (written on the map)

What proportion of seats do the Democrats win when they get 50% of the vote? _____

Draw Your Seats–Votes Curve



