Districtr Practice Challenges

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1 Introduction

Below are some exercises designed to get you familiar with Districtr and more experience with the tradeoffs that arise when you try to build districting plans.

2 Iowa

- What is the most population balanced Congressional plan you can find?

- What is the maximum number of districts you can create that don't touch the boundary of the state?

- If you make districting plans balanced to within at most 2% deviation, what is the maximum number of Democratic seats you can expect?

3 Michigan and Wisconsin

- Both of these states allow for packing and cracking because of the political geography. Make an example of each kind of plan.

- For a fixed districting plan what is the largest difference between expected D seats across all of the elections?

- Can you draw a plan where all boundary corners are right angles?[1]

4 Massachusetts

- For each election, can you construct a district that would be expected to elect a Republican under all elections?

- How does the previous answer change if you build then plan out of towns instead of precincts?

- In Lowell, draw a city council plan. How well does your map do in reflecting the overall demographic balance of the city? How does this answer change if you consider coalition districts?

5 Chicago

- What is the most population balanced plan you can construct out of community areas?

- How does the segregation of the districts change as you move from 50 individual districts to multi-member districts?

- Compare the VAP balance to the total population balance in your districting plan. How significant is the difference for potential minority representation?

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[1]Alternatively, what is the nicest looking plan you can make?