Introduction: We have seen a few examples of redistricting plans where our intuition (and mathematical measures) of fairness can be misleading. Here, we consider an extreme example.

Goal(s): Develop a sense of some further complexities of single-member geographic districts and how representation can depend on voter distribution patterns.

Activity: Consider a state with a million voters, 49% from Party A and 51% from Party B. Assume that these voters are **uniformly** distributed across the state.

1. (a) Who will win a statewide contest?
   (b) How many seats would we expect Party A to win if we divide the state into two districts? Ten districts?
   (c) Is there likely to be any way to divide the state into districts so that Party A will win any district?
2. What would the state-wide efficiency gap be for ANY districting plan for this state?
3. What would you expect the seats-votes curve to look like for this state? What would you expect the partisan bias statistic to be?
4. If you were a member of Party A in this state, what would you suggest as a strategy? Would grouping together be a good strategy? Would this necessarily bring better representation for your party?

Discussion Questions: Once you've completed the exercise, use the following questions to reflect on this exercise (we'll also discuss them together in a little bit):

1. This example illustrates an inherent limitation of single-member geographic districts. What alternatives can you imagine?