socrative

Name Solutions
Date 4/21/21

Social Choice 4/21/21 - shape and fairness

Score _____

1. Which of these shapes has the highest Polsby-Popper score?

(A) A large circle
(B) A small square
(C) A large square
(D) A regular octagon

size doesn't matter here as are = to each other

Possible PoPo scores:

circle is only shape where PoPo score = 1 which is the highest possible score!

2. Which of these provides a valid argument for using Polsby-Popper scores in redistricting? *Choose all that apply.*

(A) Circular districts are the most fair because of the way they fit together on realistic urban maps, and circles have high PoPo scores
(B) To make a carefully composed (gerrymandered) district might require winding shapes, and winding shapes have low PoPo scores
(C) Small districts are often unfair because they pack urban voters, and small districts have low PoPo scores
(D) If a district is barely contiguous like Pennsylvania-7 it will show up in a bad PoPo score

3. Suppose you are trying to cut a 10x10 grid into 2 districts of 50 units each. What is the lowest possible cut edges score?

(A) 0
(B) 10
(C) 20
(D) 100

4. Which of these provides a valid argument for using cut edges scores in redistricting? *Choose all that apply*.

(A) Scores that take the geographic units into account are more suited to real-world redistricting, which is about dividing up the units (not drawing shapes on a chalkboard)

(B) Cut edges measures the *complexity* of a district plan — complicated (gerrymandered) plans will have more cut edges, which is a bad cut edges score

(C) The cut edges score is for a whole plan, not for single districts, so it requires you to think about the whole picture, which puts decisions in context

(D) Cut edges won't penalize a districting plan just because the state itself has jagged edges or a weird shape