



## How to use Counted Out for civic engagement?

Raise citizen awareness with a screening of “Counted Out” in your community! Empower informed, engaged citizens. You can pair the film with a community read of Ismar Volic’s book, *Making Democracy Count*.

“Counted Out” shows us the power of math in our society, our economy, and our democracy. Who holds that power? Who doesn’t? And how can we all speak the language of math to fully participate in a world that belongs to everyone?

We need math to fully participate as citizens, to grapple with the math underpinning our democratic infrastructure. But we also need to be able to engage with the numbers and data that heavily influence nearly all of our democratic decision-making. Everything from health insurance to housing costs to climate change can be better understood using the lens of mathematics.

## The impact of math on democracy

The impact of math runs through our democratic process in ways most of us never notice—from gerrymandered voting districts to delegate allocation in primaries and AI-created political ads to ballot measures and candidate choices. Understanding this power is crucial to ensuring that our democratic process is fair and inclusive.

The way we tally votes, decide sizes of legislatures, allocate legislative seats (which has a direct bearing on the presidential elections via the Electoral College), and draw district lines are all mathematical processes. But these processes that power our democracy are flawed and have not been revisited in centuries. Math can tell us which mechanisms are more representative, better capture the people's preferences, and do not leave voters behind.

## Question prompts:

In the film, Ben Blum-Smith says, “Math is literally central to what democracy will or will not become because it’s lodged itself at the heart of modern life.” And Julia Angwin says “We have a math crisis in America, and I think it’s a civic crisis.”

- a. What do these thinkers mean when they describe math as central to democracy and civic life?
- b. After watching the film, how would you describe the role algorithms play in our democracy?

In the film, Ismar Volic says, “Gerrymandering is the practice of politicians choosing the voters rather than the voters choosing the politicians.” We also see an example of Supreme Court Justices unwilling to use math to examine critical issues affecting citizens.

- a. What do you make of the Supreme Court’s decision highlighted in the film?

We also hear Karim Ani say, “When you consider the issues that we as a society face, many of them, maybe even most of them are fundamentally mathematical, and what I mean by that is they’re understandable through the prism of mathematics.”

- a. Can you think of examples of specific issues that can be understood through a mathematical prism?

## Additional resources

Here are a few non-partisan resources:

Watch this [1-min video](#) on Ismar Volic’s book “[Making Democracy Count](#)” to better understand how math shapes democracy.

Watch Ben Blum Smith’s TED Talk, [What does math have to do with our democracy?](#)

[The Institute for Math and Democracy](#)

## Further exploration

- **Discover how gerrymandering works.** A game to help you get a sense of how gerrymandering works and the impact it has on our democracy. Then [try your hand at districting](#).
- Any time a candidate is elected with fewer than 50% of the votes, there is danger that [vote-splitting](#) or [spoiler effect](#) might have occurred, obscuring the true will of the voters. Look up some recent races in your town, county, district, or state. Were any of them won with fewer than 50% support? Do you think vote-splitting or spoiler might have been at play?
- Look up the population of the U.S. and divide it by 435, the number of members of the U.S. House of Representatives. What you’ll get is the number of people each member represents, on average. Do you think it is manageable to faithfully represent this many people? How big do you think the U.S. House should be?

- Look up some recent congressional or state legislature races in your district. Were they competitive, namely were they won by less than a 10% margin? If not, why do you think that is? Is it just that the population in your district is overwhelmingly Republican or Democrat or might some other factors have contributed, like the primary system, winner-take-all election method, or gerrymandering?
- What do you think is the least possible number of votes (people votes, not electoral votes) with which a candidate could win the U.S. presidential election? Assume everything is regular, no foul play, the voting machines are working the way they're supposed to, and electors are casting their vote according to how the people of the state voted. (Hint: The answer is very surprising since you're allowed to assume an extremely hypothetical scenario.)