

THE GERRYMANDERING MANUAL



*You are a mapmaker, which means you make maps...
and determine who wins elections.*

Components

- 1 board



Each hexagon on the board is a county.

- 110 district borders



- 73 voter tokens



*There are 18 voter tokens per party (valued 1-10).
There is also one neutral token (valued 0).*

- 28 district markers



There are seven district markers per party.

Set Up

Each player chooses a party: Red Elephants, Blue Donkeys, Yellow Porcupines, or Green Leaves.

Randomly distribute all voter tokens of the participating parties, and the neutral token, on the board. (Flip the tokens onto their blank sides, mix them up, then turn them back over.) There should be one voter token per county. With two players, use the 37 central counties. With three, use the 55 central and light grey counties. With four, use all 73 counties. The random setup does not give any player a noticeable advantage.

3 Player Game



*This is a random setup with Red Elephants, Blue Donkeys,
and Yellow Porcupines.*

Goal

At the end of the game, the entire board will be sectioned off into districts. Whoever has the most districts wins.

Gameplay

Players take turns placing district borders. Whoever voted most recently goes first. The first player starts by placing only one district border. The second player places two. The next places three. Then players continue in order, each placing four district borders per turn.

You can place district borders near one another or scattered across the board. You cannot place them on edges of the board.

A **district** is a fully closed-off group of counties. Each district must contain at least four counties. You **cannot** place a district border that would close off fewer than 4 counties.

3 Player Game



This is the smallest possible district. It contains four counties, fully closed off by district borders and edges of the board.



Placing a district border here is illegal because it would close off fewer than four counties.

A district can have more than four counties. However, a group of counties is **not** considered a district if the counties can be split into smaller districts.

4 Player Game



This is not a district. It contains eight counties, which can be split into two districts of four.



Here is a way to split the counties into two districts of four.

2 Player Game



This is a district that contains seven counties.



It cannot be split into multiple districts of at least four counties each.

A strangely shaped district can sometimes contain eight (or more) counties.



Even though it contains eight counties, this is a district.



It cannot be split into multiple districts of at least four counties each.

When a district is formed, the player with the most votes wins the district. This player immediately places one of their district markers inside the district.



The Yellow Porcupines have 11 votes, so win the district. The Red Elephants only have 9 votes, and the Blue Donkeys only have 5 votes. The Yellow Porcupines place a district marker inside the district.

If there is a tie for most votes, whoever closed off the district gets to choose the winner among the tied players.



The Yellow Porcupines placed the final district border to close off this district. The Red Elephants and Blue Donkeys tied with 14 votes, so the Yellow Porcupines get to choose which of them wins this district.



The Yellow Porcupines choose the Blue Donkeys.

You cannot place district borders inside an already completed district.

When the entire board is split into districts, the game ends.

The Winner

Whoever has the most districts at the end of the game wins.

If there is a tie, whoever (among tied players) controls the most **swing counties** wins. Swing counties are the counties valued 0 and 1, colored purple instead of white.

On the rare occasion that there's still a tie, go to the Supreme Court. Whichever tied player has the fewest total votes for their own party within their own districts wins.



The Yellow Porcupines win this game because they have more districts (5) than the Blue Donkeys (4) and Red Elephants (3).



All parties are tied with 4 districts each. The Red Elephants win because they control more swing counties (2) than the Blue Donkeys (1) or Yellow Porcupines (1).

Strategy Tips

At first, Mapmaker can seem overwhelming since players have so many options. Here are a few strategy tips to help you get started:

1. Go for swing counties. The game often ends in a tie, with swing counties determining the winner.
2. Pack your opponent's voters, clumping a lot of them into one district. Then they will have fewer votes to win other districts.
3. Crack your opponent's voters, splitting them across different districts. Try to win these districts by narrow margins.

FAQ

Q: Who goes first?

A: Whoever voted most recently (in a school, local, or federal election) goes first.

Q: Can I place a district border on the edge of the board?

A: No. The edge of the board acts as automatic district borders. Note that what counts as "the edge" changes between 2, 3, and 4 player games.

Q: Can I place a border inside an already completed district?

A: No.

Q: Can I pass my turn?

A: No. You must place four district borders every turn (except one, two, and three district borders on the 1st, 2nd, and 3rd player's turns, respectively).

Q: What happens if I close a district where I tied with someone else?

A: You can choose yourself as the winner of that district.

Q: What happens if I close a district where other players tied?

A: You get to choose which of those tied players wins the district.

Q: What are swing counties?

A: Swings counties are the counties valued 0 and 1 (colored purple). During the game, they behave like any other counties. At the end of the game, they break ties.

Q: Can I win a swing county that doesn't belong to my party?

A: Yes. The color of a single voter swing county only indicates one voter to the given party in determining who wins the district. But the ultimate winner of that district controls the swing county for breaking end-game ties.

Solo Player Rules (Easy Version)

Randomly distribute Red Elephant and Blue Donkey voter tokens (and the neutral swing county) as if you were playing a two player game. Choose one party. Place any number of district borders until the entire board is sectioned into districts.

Attempt to win by as many districts as possible. You're **not** allowed to tie any districts. Your score is just your number of districts minus the other party's number of districts. Of course, like in real gerrymandering, it's easy to win when you're the only one playing...



In this solo game, you (Blue Donkeys) win 7-1.

Now try making competitive districts for a more challenging solo player game.

Solo Player Rules (Competitive Districts)

Randomly distribute Red Elephant and Blue Donkey voter tokens (and the neutral swing county) as if you were playing a two player game. Using as many district borders as you want, separate the voters into districts so that every district has the same number of Red Elephants and Blue Donkeys. Different districts can be tied at different amounts. For example, one district can have 7 Red Elephants and 7 Blue Donkeys, while another district has 15 Red Elephants and 15 Blue Donkeys.

You only win if **all** districts are tied between the Red Elephants and Blue Donkeys. You then score 10 points per district, minus 1 point for each district border you used. Your goal is to create as high of a score—as competitive of districts—as possible.



In this solo game, you managed to create 6 tied districts using 51 district borders. Your final score is $6 \times 10 - 51$, which equals 9.

About Gerrymandering

Redistricting occurs every ten years after the census. Congressional, state legislative, and local government districts are redrawn to account for population shifts. In a majority of states, the majority party of the **state legislature** is in charge of drawing congressional and/or state legislative districts. In most of these states, the **governor** has veto power over these maps.¹

Gerrymandering is when politicians manipulate the district boundaries to benefit themselves and their party. Packing and cracking are the main tactics of gerrymandering. **Packing** the opposing party's voters into one district makes winning other districts more difficult for that party. **Cracking** the opposing party's voters across multiple districts prevents that party from winning those districts.

In 1812, founding father and former vice president **Elbridge Gerry** passed a salamander-shaped district into law. As a result, his party won a majority of seats in the state senate without a majority of the vote. "Gerrymander" was derived from "Gerry" + "salamander" and popularized in a political cartoon.²



"The Gerry-mander" cartoon was originally published in the Boston Gazette.³

¹ "50 State Guide to Redistricting." *Brennan Center for Justice*, 21 Jun. 2018, www.brennancenter.org/analysis/50-state-guide-redistricting.

² Trickey, Erick. "Where Did the Term 'Gerrymander' Come From?" *Ask Smithsonian*, 20 Jul. 2017, www.smithsonianmag.com/history/where-did-term-gerrymander-come-180964118/.

³ "The Gerry-Mander.png." *Wikimedia Commons*, 26 Mar. 1812, https://commons.wikimedia.org/wiki/File:The_Gerry-Mander.png.

Both parties are guilty of partisan gerrymandering. Since 1972 both parties have gerrymandered dozens of state houses, senates, and congressional maps to their advantage. Gerrymandering is not a partisan issue. It hurts everyone by causing "wrong winner" outcomes and distorting democracy. For example, in 2016 in Pennsylvania, Republicans won 13/18 congressional seats despite winning around half of the popular vote.⁴ In Maryland, Democrats won 7/8 congressional seats even though they only won 60% of the popular vote.⁵

Partisan gerrymandering can result in incumbent protection, reduced competition, worse outcomes for people of color, and generally a distortion between what people want and the representatives who get elected.⁶ Furthermore, when politicians are essentially guaranteed victory in gerrymandered districts, they have no incentive to reach across the aisle.

Several Supreme Court cases have focused on partisan gerrymandering. In 1986 in **Davis v. Bandemer**, the Supreme Court ruled 6-3 that partisan gerrymandering claims are justiciable (i.e. subject to trial), paving the way for future cases.⁷ In 2004 in **Vieth v. Jubelirer**, the Supreme Court upheld 5-4 a lower court's dismissal of a partisan gerrymandering case.⁸ Swing justice Anthony Kennedy, however, said that he would be willing to strike down gerrymandering upon establishment of a clear, discernable standard. In 2018, the Supreme Court punted on two partisan gerrymandering cases: **Gil vs. Whitford** and **Benisek vs. Lamone**.^{9,10} Proposals like the **efficiency gap** (measuring each party's wasted votes) did not satisfy Kennedy before his retirement. As of Mapmaker's publication, the Supreme Court has yet to establish a fair, consistent measure for what counts as gerrymandering.

⁴ "Pennsylvania Election Results 2016: House Live Map by District, Real-Time Voting Updates." *Politico*, 13 Dec. 2016, www.politico.com/2016-election/results/map/house/pennsylvania/.

⁵ "2016 Maryland House Election Results." *Politico*, 13 Dec. 2016, www.politico.com/2016-election/results/map/house/maryland/.

⁶ Daley, David. *Ratf**ked: the True Story Behind the Secret Plan to Steal America's Democracy*. Liveright, W.W. Norton & Company, 2016.

⁷ "Davis v. Bandemer." *Ballotpedia*, 30 Jun. 1986, www.ballotpedia.org/Davis_v._Bandemer.

⁸ "Vieth v. Jubelirer." *Brennan Center for Justice*, 28 Apr. 2004, www.brennancenter.org/legal-work/vieth-v-jubelirer.

⁹ "Gill v. Whitford." *Oyez*, 18 Jun. 2018, www.oyez.org/cases/2017/16-1161.

¹⁰ "Benisek v. Lamone." *Oyez*, 18 Jun. 2018, www.oyez.org/cases/2017/17-333.

We have been primarily discussing **partisan gerrymandering**: drawing lines to benefit your party. Sadly, mapmakers also engage in **racial gerrymandering**: drawing lines to disadvantage a particular race. Racial gerrymandering is unconstitutional.¹¹

To clarify, considering race while drawing maps is not necessarily racial gerrymandering. In 1982, Congress amended the Voting Rights Act, requiring that people of color be able to elect their preferred candidates.¹² The Courts interpreted this to mean that mapmakers must draw a **majority-minority district** (i.e. a racial minority making up a majority) where such a district can be drawn, and where there's evidence of racially polarized voting and a history of racial discrimination.¹³ Some strangely-shaped districts that appear to be gerrymandered are actually majority-minority districts (e.g. Illinois's 4th congressional district, shaped like an earmuff). Shape isn't everything. What counts as a good district is up for debate.

In an ideal world, how should we draw districts? An important base requirement for drawing districts (beyond compliance with the Constitution, the Voting Rights Act, and state constitutional criteria) is that they must contain roughly the same population size.¹⁴ What other measures of "fairness" should we prioritize? Some potential measures include whether districts are compact, competitive, and contain communities of interest.

Many people believe that districts should be compact. However, experts disagree on what counts as a **compact district**. There are three main types of qualities: 1) smoothness of lines, 2) overall proximity to the district's center, and 3) corresponding housing patterns.¹⁵ Although many states require compact districts, few specify exactly what that means.

Competitive districts are districts where both parties have a chance to win. They hold incumbents accountable and incentivize politicians to reach across the aisle. However, if all districts are competitive, one party could sweep the districts with a small quantity of extra votes (winning all districts by small margins).¹⁶

Districts that contain **communities of interest** allow representatives to actually represent their constituents. But what is a "community of interest"? Do voters care about being in the same district as their school, library, public swimming pool, church, synagogue, mosque, etc? An independent commission in California has successfully used communities of interest to draw districts. However, determining which "communities of interest" to use for redistricting requires considerable input from countless people—and not everyone will ever be satisfied.¹⁷

Although politicians are the ones gerrymandering, some believe that voters have made it easier for them by **self-sorting**. Democrats have congregated in cities and Republicans across rural areas. Furthermore, their political ideologies have become more predictable, which politicians can take advantage of when drawing lines.¹⁸

Increasingly, anti-gerrymandering advocates around the country have pushed to remove redistricting from the hands of politicians. Instead, most believe that **independent commissions** should draw the lines. In many states, the only way to get an independent commission is through an **open ballot initiative**, which is where citizens themselves (instead of politicians) vote on whether or not to have an independent commission.¹⁹

¹¹ "Glossary," *Redistricting the Nation*, www.redistrictingthenation.com/glossary.aspx.

¹² "Section 2 of the Voting Rights Act." *The United States Department of Justice*, 8 Aug. 2015, www.justice.gov/crt/section-2-voting-rights-act.

¹³ "Thornburg v. Gingles." *Oyez*, 30 Jun. 1986, www.oyez.org/cases/1985/83-1968.

¹⁴ "Karcher v. Daggett." *Oyez*, 22 Jun. 1983, www.oyez.org/cases/1982/81-2057.

¹⁵ "Where Are the Lines Drawn?" *All About Redistricting*, redistricting.ils.edu/where-state.php#compactness.

¹⁶ Druke, Galen. "Competitive Elections in Arizona." *The Gerrymandering Project*, FiveThirtyEight, season 1, episode 5, www.fivethirtyeight.com/features/want-competitive-elections-so-did-arizona-then-the-screaming-started/.

¹⁷ Druke, Galen. "Ditching the Politics in California." *The Gerrymandering Project*, FiveThirtyEight, season 1, episode 6, www.fivethirtyeight.com/features/even-a-gerrymandering-ban-cant-keep-politicians-from-trying-to-shape-their-districts/.

¹⁸ Druke, Galen. "Partisan Gerrymandering in Wisconsin." *The Gerrymandering Project*, FiveThirtyEight, season 1, episode 2, <https://fivethirtyeight.com/features/should-partisan-gerrymandering-be-illegal/>.

¹⁹ Farmer, Alexis, and Annie Lo. *Current Citizen Efforts to Reform Redistricting*, Brennan Center for Justice, 12 Oct. 2018, www.brennancenter.org/analysis/current-citizen-efforts-reform-redistricting.

Many also cite **algorithms** as potentially helpful for drawing fair districts. Admittedly, software like Maptitude for Redistricting has, in the first place, made it easier to gerrymander. Redistricting algorithms may eventually serve as a remedy. However, we still must decide what any algorithm should prioritize: majority-minority districts, compact districts, competitive districts, communities of interest, or some weighted combination. By default, optimizing for one metric comes at the expense of another. After we select criteria, algorithms can generate thousands of maps. We can even compare actual maps to this collection of algorithmically generated maps, and label extreme outliers as gerrymanders.²⁰

Gerrymandering is clearly bad for our democracy. Gerrymandering is also complicated; we can't just "fix" it in a single swoop, and the Supreme Court has not helped so far. Improving the redistricting process will require time and experimentation state by state. Most importantly, it will require taking gerrymandering out of the hands of politicians. We should be choosing our politicians, not the other way around. Gerrymandering is not a game. It affects real voters in real districts across the country.

To learn more about gerrymandering, we strongly recommend FiveThirtyEight's podcast *The Gerrymandering Project*, David Daley's book *Ratf**ked: Why Your Vote Doesn't Count*, and Justin Levitt's site *All About Redistricting*.

20 Mattingly, Jonathan. "Ensembles and Outliers." *Quantifying Gerrymandering*, 12 Jul. 2018, www.sites.duke.edu/quantifyinggerrymandering/2018/07/12/ensembles-and-outliers/.

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Go! Games
6411 Burleson Road
Austin, Texas 78744
1-866-611-2248

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