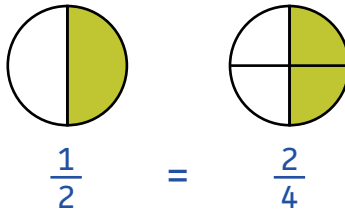


Equal vs. Equivalent Areas Project



Source: Fourleaflover/iStock.com



Part One: Research

Source: Memento Design/iStock.com

Answer these questions in your notebook.

Mathematical Definitions:

1. What does equal mean? What does equivalent mean?
2. Explain the difference between equal and equivalent. Does equivalent always mean equal? Why or why not?
3. Support your reasoning with mathematical evidence (example: fractions, area of shapes, pictures, tables, graphs, etc.).

Social Studies Definitions:

4. What is gerrymandering? (Watch the video and select *at least 2* articles)
 - Watch TED-Ed Video: “Gerrymandering: How Drawing Jagged Lines Can Impact an Election” (<https://bit.ly/3xZKREE>)
 - Article: “The Math Behind Gerrymandering and Wasted Votes” (<https://bit.ly/3GgVx3>)
 - Article: “Investigating Gerrymandering and the Math Behind Partisan Maps” (<https://nyti.ms/3EtUspK>)
 - Article: “Gerrymandering Background” (<https://bit.ly/3Eqo9bc>)
 - Article: “The Geeks Who Put a Stop to Pennsylvania Partisan Gerrymandering” (<https://bit.ly/32Z9xBF>)
 - Article: “The Mathematicians Who Want to Save Democracy” (<https://bit.ly/3omiLA6>)
 - Article: “Rig the Election With Math!” (<https://53eig.ht/3Ga5ctE>)

As you explore and research, answer the following:

- What did you learn?
 - What surprised you?
 - What do you still wonder about?
5. What does “redistricting” mean?
 - Analyze the Atlas of Redistricting (<https://53eig.ht/3Ga6Rzo>)



Part Two: Create Presentation

Source: Memento Design/iStock.com

Required: (Due _____)	Optional Challenge: (Can be chosen as future homework assignment)
<ul style="list-style-type: none">• Presentation (i.e., Google Slide, PowerPoint) or <ul style="list-style-type: none">• <u>Infographic</u> (can be created on Canva, https://www.canva.com/create/infographics/)	<ul style="list-style-type: none">• Select a district to analyze and determine fairness based on the area of the district and representation.• Provide claim, mathematical evidence, and reasoning.• Answer Extension Questions.



Project Checklist: Before you submit, your work must include the following . . .

Source: Momento Design/iStock.com

- ☐ Slides #1-2: Definitions
 - ☐ Equal vs. Equivalent definitions and examples
 - ☐ Gerrymandering definition
 - ☐ Redistricting definition
- ☐ Slide #3: Research Slide
 - ☐ What did you learn?
 - ☐ What surprised you?
 - ☐ What do you still wonder about?
- ☐ Slides #4–5: Reflection Slides
 - ☐ How does area apply to the real world?
 - ☐ Answer focus questions:
 - ☐ General: How can I apply my knowledge of definitions of equal and equivalent to areas in the real world to determine fairness?
 - ☐ Local: What connections do you see or wonder about equal area in our Evanston community?
 - ☐ Do equal and equivalent mean the same thing? Why or why not?
 - ☐ Who does gerrymandering impact or affect?
- ☐ Slides #5–6: Challenge Slides (optional)
 - ☐ Select a district to analyze and determine fairness based on the area of the district and representation.
 - ☐ Provide your claim, mathematical evidence, and reasoning.
 - ☐ Answer the Extension Questions in Worksheet 6 on your challenge slides.