


Farshid Safi, Sarah B. Bush, & Siddhi Desai. (2018).  
Gerrymandering: When Equivalent Is Not Equal!  
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College of Community  
Innovation and Education

Reasoning and Sense Making

Island Inheritance

You and 8 family members have inherited the island with the surrounding waters.

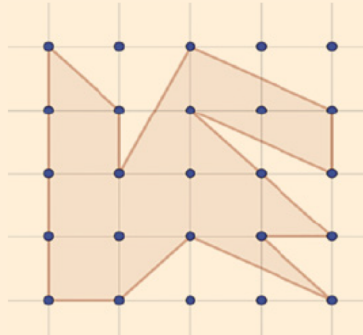


How do you determine fair ways to split up the region?

## Reasoning with Area of a Region

Fig. 2 The Dragon Task provided a visual exploration of area.

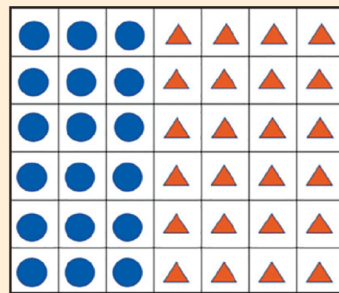
### Finding the Area of a Region



What strategies did you use? Why?

## Gerrymandering Task: Part 1

1. Create 6 equal districts by having \_\_\_\_ shapes in each district.



Districts won by Circles \_\_\_\_

Districts won by Triangles \_\_\_\_

Overall winner of the state \_\_\_\_

What strategies did you use? What do you notice/wonder?

## Gerrymandering Task: Part 2

2. Is it possible to create the same result (winner) as part 1 with 6 equal districts in a different way? Use the figure to illustrate how the district could be reconfigured.

●	●	●	▲	▲	▲	▲
▲	●	●	●	▲	▲	▲
▲	▲	●	●	●	▲	▲
▲	▲	●	●	●	▲	▲
▲	●	●	●	▲	▲	▲
●	●	●	▲	▲	▲	▲

Districts won by Circles

Districts won by Triangles

Overall winner of the state

## Gerrymandering Task: Part 3

3. Is it possible to create a *different* result (winner) with 6 equal districts?

●	●	●	▲	▲	▲	▲
▲	●	●	●	▲	▲	▲
▲	▲	●	●	●	▲	▲
▲	▲	●	●	●	▲	▲
▲	●	●	●	▲	▲	▲
●	●	●	▲	▲	▲	▲

Districts won by Circles

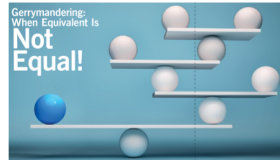
Districts won by Triangles

Overall winner of the state

What strategies did you use? What do you notice/wonder?

Thoughts and reflections

## Reflections



- Do mathematical approaches necessarily and inherently advocate for fair results?
- What are the potential mathematical and societal impacts of reconfiguring districts so that a particular group is more likely to win the state election?

## Resources

### *Games:*

- [Mapmaker: The Gerrymandering Game](#)
- [The ReDistricting Game](#)

### *In the news:*

- [Metric Geometry and Gerrymandering Group](#) (Moon Duchin of Tufts University and Justin Solomon of MIT)
- [The Gerrymandering Project](#) (fivethirtyeight.com)