

## The State of Gerryland

You live in Gerryland, the 51st state in the United States. It is very small. There are only 50 eligible voters living in Gerryland, and they have two political parties: The Circle Party and the Square Party. All members of the Circle Party live in one precinct, and all members of the Square Party live in the other precinct.

You have been elected to the state legislature. The legislature now has the task of drawing new congressional district boundaries. It has to use the following criteria:

- By law, there must be five districts total. Each district must have exactly 10 people in it.
- Each district will have exactly one representative in Congress.
- Assume that in the election, there are no crossover votes. This means Squares vote for Square candidates, and Circles vote for Circle candidates.

Before continuing, answer these questions:

1. What fraction of Gerryland's eligible voters are Squares? What fraction are Circles?

Squares \_\_\_\_\_ Circles \_\_\_\_\_

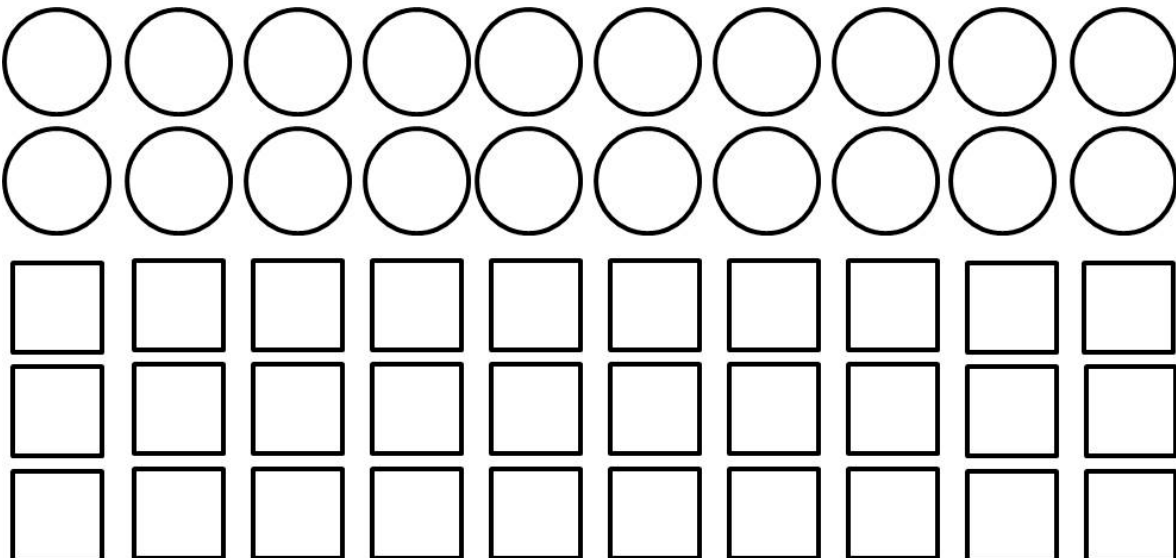
2. What is the ratio of Squares to Circles in Gerryland?

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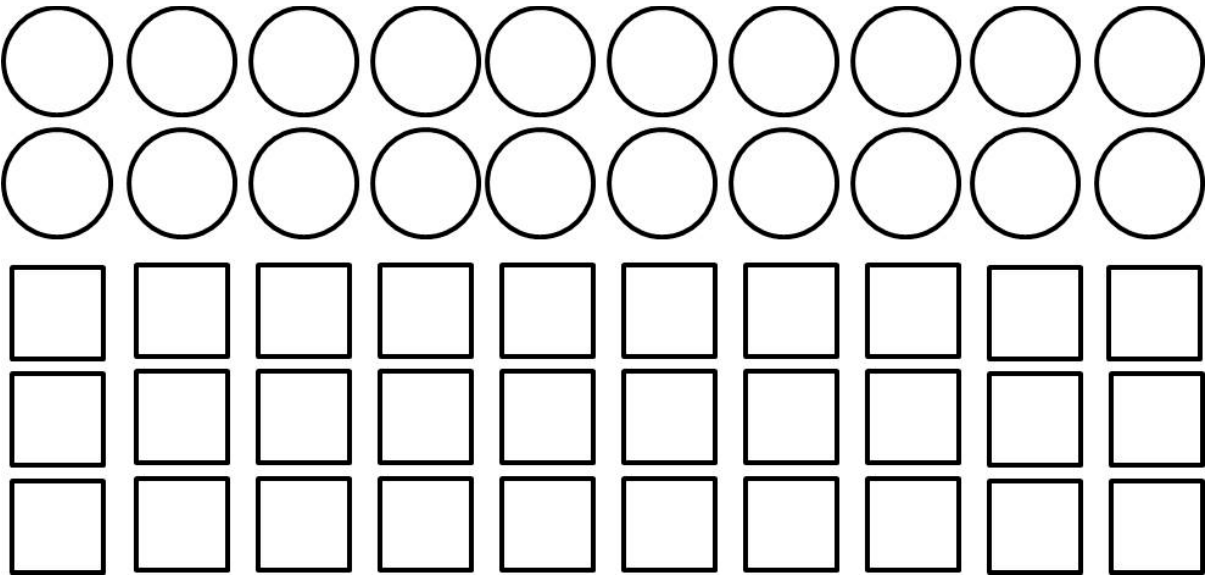
**Directions:** Read and complete each problem below. In all three problems, draw lines around districts in **pencil first**, then draw a **blue or black line** around districts that will have a Square representative. Draw a **red line** around districts that will have a Circle representative.

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**Problem One:** On the figure below, draw the district boundaries so that the Squares and Circles have congressional representatives in proportion to the fraction of all eligible voters they represent. For example, if one-fifth ( $\frac{1}{5}$ ) are Squares, you would draw a boundary around 10 square shapes, and that would represent the total Square voters in Gerryland.



**Problem Two:** On the figure below, draw the district boundaries so that the Squares have all the congressional representatives after the next election.



**Problem Three:** On the figure below, draw the district boundaries so that the Squares have four out of five congressional representatives after the next election.

