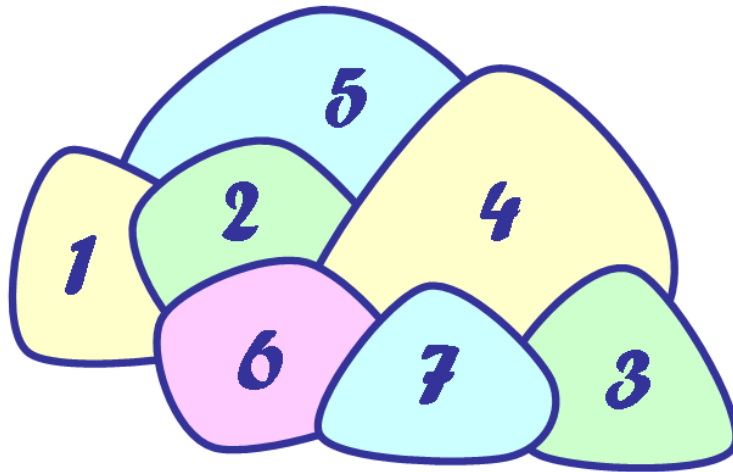


Bread and Butter Politics

The people of Utopia had divided into two political parties. The "*Bread & Butter*" party offered daily bread & butter to all the people. The "*Nectar & Ambrosia*" party offered daily nectar & ambrosia to those shorter than average.

Utopia had 7 districts. The party which won in district 1 got 1 seat in parliament. The party which won in district 2 got 2 seats in parliament. The pattern continues till... The party which won in district 7 got 7 seats in parliament. Parliament therefore has 28 seats altogether. The party with the majority of seats has power.



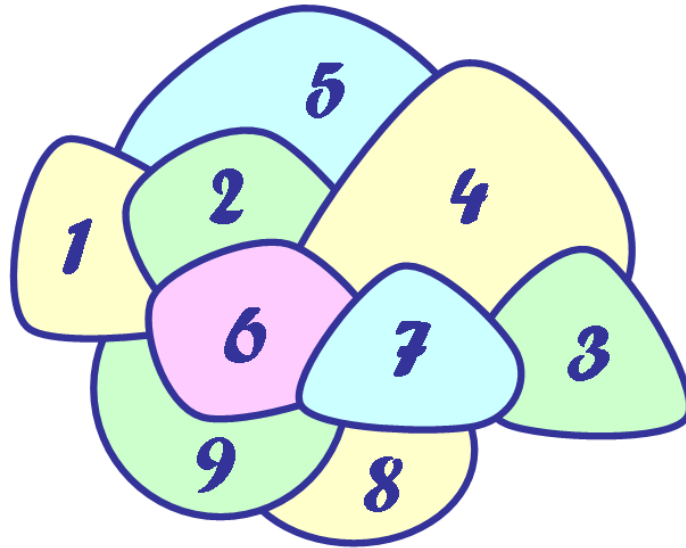
In the first election, the Bread & Butter party won overall, and won more districts than the Nectar & Ambrosia party. However, the Nectar & Ambrosia party were confident because all they had to do to win the next election was to convince any one of the Bread & Butter districts to change their vote.

How did each of the districts vote in the first election?

Extensions:

How would you change the number of seats in each region so that a tie was impossible?

8th and 9th regions worth 8 and 9 seats were added for the second election. Also, the "Water & Gruel" party was born. Suppose the Water & Gruel party got fewer seats and won less districts than the other two parties. The Nectar & Ambrosia party got fewer seats and won less districts than the Bread & Butter party. If the Bread & Butter party lost one of its districts to either of the other parties, that party would then have more seats than the other parties. Given this situation, which districts voted Bread & Butter?



The Math in This Problem:

In this puzzle, students are presented with a math problem in the form of politics, where two parties are attempting to win over votes from various districts, with each district representing a different number of votes. The use of analytical skills and mathematical operations, such as addition and subtraction, will be particularly useful when progressing through this brainteaser.

