

Webster's Method

Lecture 22 Section 4.4

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1 Webster's Method

2 Comparisons

3 Assignment

Outline

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Webster's Method

Definition (Webster's Method)

By **Webster's method**, we start with the *rounded* quotas. If the total is too small, then we use a smaller modified divisor. If the total is too large, then we use a larger modified divisor. The process continues until the rounded modified quotas add up to M .

Example

Example (Example)

- Apply Jefferson's method to the three states A , B , and C , with populations 3 million, 6 million, and 7 million and 50 seats to be apportioned.
- We found $SD = 320000$ and $q_1 = 9.375$, $q_2 = 18.75$, and $q_3 = 21.875$.
- Apply Webster's method.

Example – CA, TX, AK, and WY

Example

- The populations of CA, TX, AK, and WY, in tens of thousands, are 3725, 2515, 71, and 56 people, respectively.
- Use Webster's method to apportion 91 seats.

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Comparisons

Example (Comparisons)

- Let the populations of five states, in millions, be 11, 12, 13, 14, and 100.
- Apportion 28 seats to these states using Hamilton's, Jefferson's, Adams's, and Webster's methods.
- Compare the results.
- Which states are favored by the different methods?

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- Chapter 4: Exercises 35, 36, 37, 38, 39, 40.