

The Apportionment Problem

Bringing Down the House

Charles Biles, Ph.D.

Mathematics 5: Contemporary Mathematics

College of the Redwoods

Fall Semester 2016

website: nia977.wixsite.com/drbcap

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James Madison
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The Congressional Apportionment Problem

Determine how many seats in the U.S.
House of Representatives each state gets.

CONGRESSIONAL SEATS

2010
OFFICIAL RESULTS



(US apportionment population = 309,183,463)/435 \approx 710,767

<http://www.census.gov/2010census/data/apportionment-data.php>

An Historical Approach

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- What was it like to live back then?
- How did we get from then to now?

The Constitution

We first go back to the summer of 1787, Independence Hall, Philadelphia, Pennsylvania, where the framers of the U. S. Constitution met to outline a new government.



The Constitution: Article I

Section 1. All legislative Powers herein granted shall be vested in a Congress of the United States, which shall consist of a Senate and House of Representatives.

The Constitution: Article I

Section 2. The House of Representatives shall be composed of Members chosen every second Year by the People of the several States, . . .

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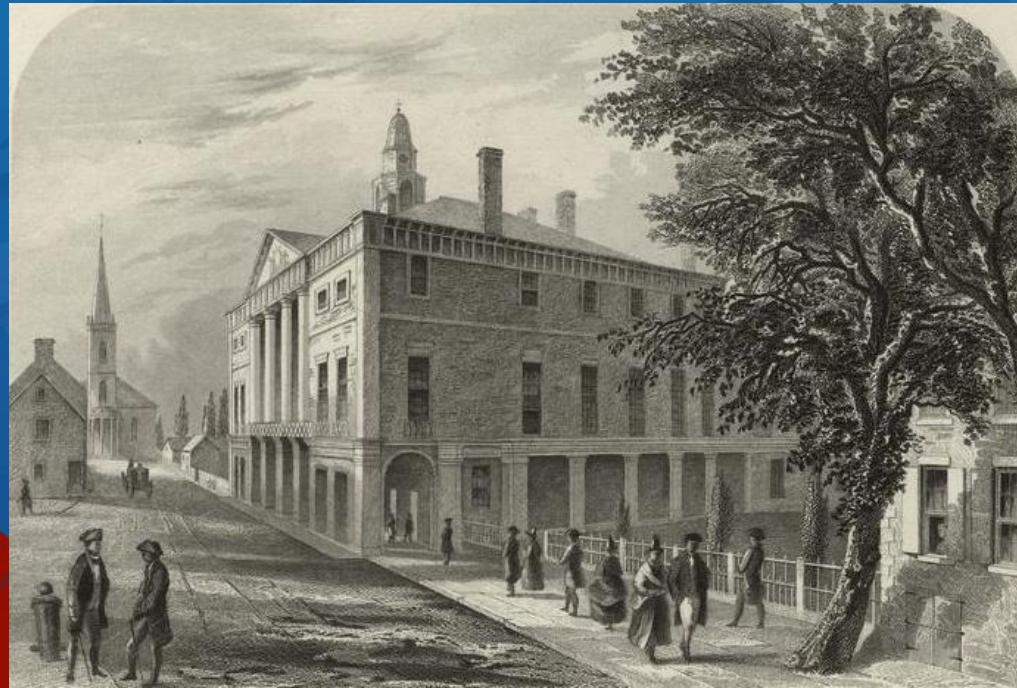
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The Number of Representatives shall **not exceed one for every thirty Thousand**, but **each State shall have at Least one Representative**; . . .

The First House

- The first House met in Federal Hall in New York City on 4 March 1789; but, no quorum.



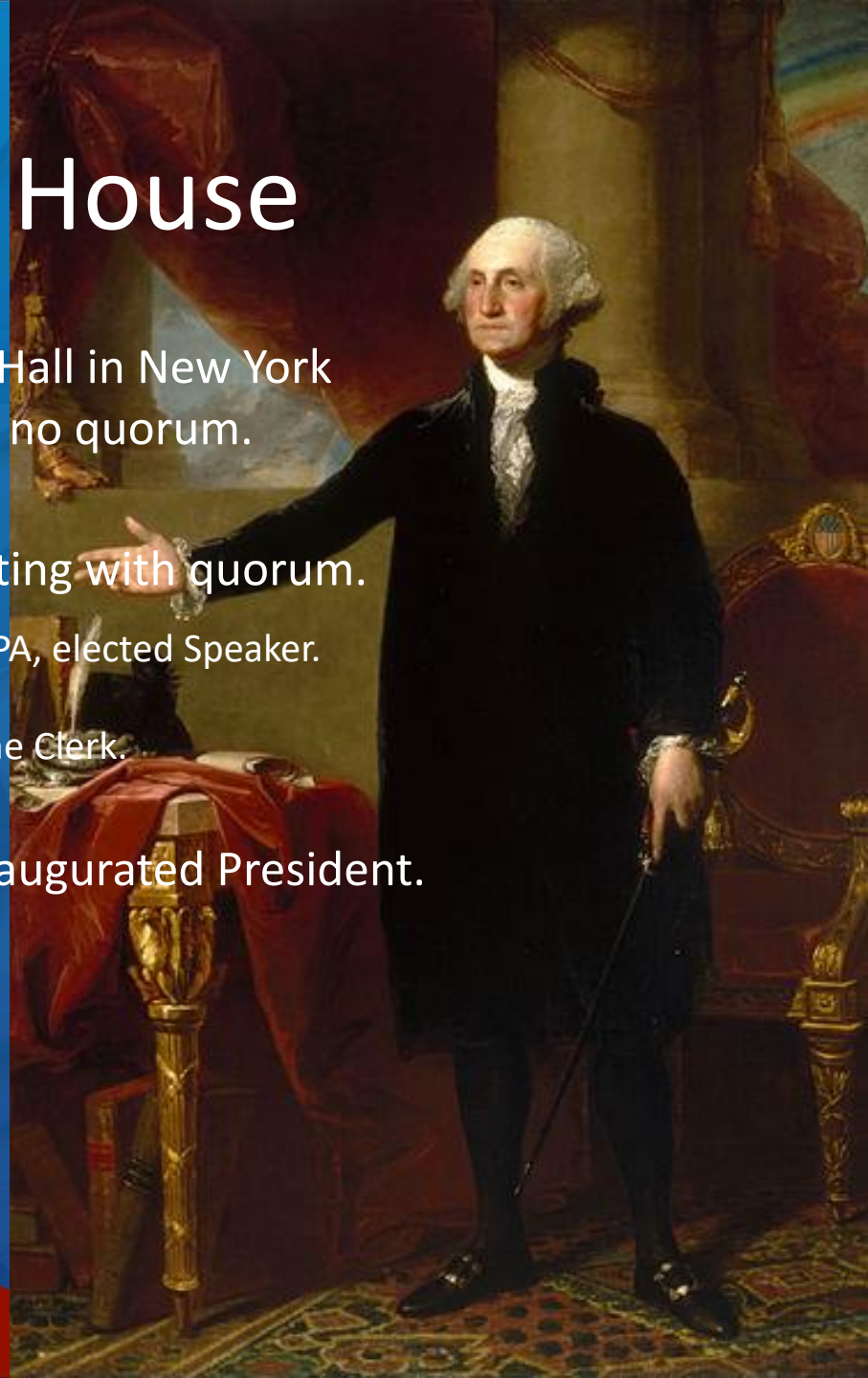
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 - **Frederick Augustus Muhlenburg**, PA, elected Speaker.
 - John Beckley elected Clerk.
 - Members deliver credentials to the Clerk.



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 - Members deliver credentials to the Clerk.
- 30 April George Washington inaugurated President.



The First Census 1790

State	Population
CT 5	236841
DE 1	55540
GA 3	70835
KY 2	68705
MD 6	278514
MA 8	475327
NH 3	141822
NJ 4	179570
NY 6	331589
NC 5	353523
PA 8	432879
RI 1	68446
SC 5	206236
VT 2	85533
VA 10	630560
US 67	3615920

The first apportionment population census.

Source:
Balinski and Young,
Fair Representation,
Second Edition, 2001,
page 158.

The Assignment

You are a citizen from the same state as the congressman you drew. You are visiting Philadelphia in December 1792. Your congressman is happy to hear of your visit because he has heard of your expertise. Your congressman has sent you an urgent message pleading to meet with you and advise him about apportionment. You agree. Together you create an apportionment proposal.

The Assignment

Your proposal should be consistent with constitutional guidelines and include the following:

- a short biography of your congressman;
- the apportionment for each state with an explanation of your method;
- the resulting House size. Please remember your House size for the next class.

Please submit your word processed report by class time on Tuesday, 1 November. If you prefer you may email your report by 4 p.m. Monday to Dr. Biles at nia@suddenlink.net.

Your Congressman

To find out about your congressman, consult a website such as

<http://bioguide.congress.gov/biosearch/biosearch.asp>

http://en.wikipedia.org/wiki/2nd_United_States_Congress

These websites summarize the history of the 2nd Congress. The Wikipedia site has links to all congressmen for the second session of Congress.



Thank You