

# Hamilton's Method (1790) (Quota Method)

- ▶ Choose the size of the House to be apportioned.
- ▶ Find the quotas and give to each state the whole number contained in its quota.
- ▶ Assign any seats which are as yet unapportioned to those states having the largest remainders.

# Jefferson's Method (1790) (Divisor Method)

- ▶ Choose the size of the House to be apportioned.
- ▶ Find the divisor  $x$  so that the whole numbers contained in the quotients of the states sum to the required total.  
i.e. Find the citizens per representative so that this works.
- ▶ Give to each state its whole number.

## Lowndes' Method (1822) (Quota Method)

Measures proportional size of remainders in the quota.

- ▶ Choose the size of the House to be apportioned.
- ▶ Find the quotas and give to each state the whole number contained in its quota.
- ▶ Divide the remainder of the quota by the whole number to create an adjusted remainder.
- ▶ Assign any seats which are as yet unapportioned to those states having the largest adjusted remainders.

# John Quincy Adams' Method (1832) (Divisor Method)

Same as Jefferson, but round up.

- ▶ Choose the size of the House to be apportioned.
- ▶ Find the divisor  $x$  so that the smallest whole numbers containing the quotients of the states sum to the required total.
- ▶ Give to each state its whole number.

# Webster's Method (1832) (Divisor Method)

- ▶ Choose the size of the House to be apportioned.
- ▶ Find the divisor  $x$  so that the whole numbers **nearest to** the quotients of the states sum to the required total.  
i.e. “normal” rounding
- ▶ Give to each state its whole number.

## Dean's Method ( $\sim 1832$ ) (Divisor Method)

- ▶ Choose the size of the House to be apportioned.
- ▶ Pick a divisor  $x$  and calculate the quotient for each state. Round up or round down so that the average constituency size is closer to  $x$ .
- ▶ Adjust  $x$  as needed so that the House is of the appropriate size.

# Hill's Method (Divisor Method – really?)

- ▶ Choose the size of the House to be apportioned.
- ▶ Give to each state a number of seats so that no transfer of any one seat between two states can reduce the percentage difference in representation between those two states.