

U.S. Constitution, Article 1, Section 2, Clause 3

Required a census every 10 years and that:

“Representatives and direct Taxes shall be apportioned among the several States which may be included within this Union, according to their respective Numbers, which shall be determined by adding to the whole Number of free Persons, including those bound to Service for a Term of Years, and excluding Indians not taxed, three fifths of all other Persons.

The actual Enumeration shall be made within three Years after the first Meeting of the Congress of the United States, and within every subsequent Term of ten Years, in such manner as they shall by Law direct.

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

The 1790 Census

State	Appt. Value	State	Appt. Value
Virginia	630,560	New Jersey	179,570
Massachusetts	475,327	New Hampshire	141,822
Pennsylvania	432,879	Vermont	85,533
North Carolina	353,523	Georgia	70,835
New York	331,589	Kentucky	68,705
Maryland	278,514	Rhode Island	68,446
Connecticut	236,841	Delaware	55,540
South Carolina	206,236		

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 (~ 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.