

As seen on Facebook . . .

Electoral College Math

The population of **California** is 38,800,000

The population of **Wyoming** is 584,153

California has 55 electoral votes

Wyoming has only 3

it takes 705,454 **Californians** to equal 1 electoral vote

it takes 194,717 **Wyomingites** to equal 1 electoral vote

That makes every vote from **Wyoming** worth 362%
what each vote from **California** is worth in the
election for the President of the United States of America.

CALIFORNIAN



WYOMINGITE

We need to ditch the electoral college.

What problems/errors do you see???

Apportionment

Steps:

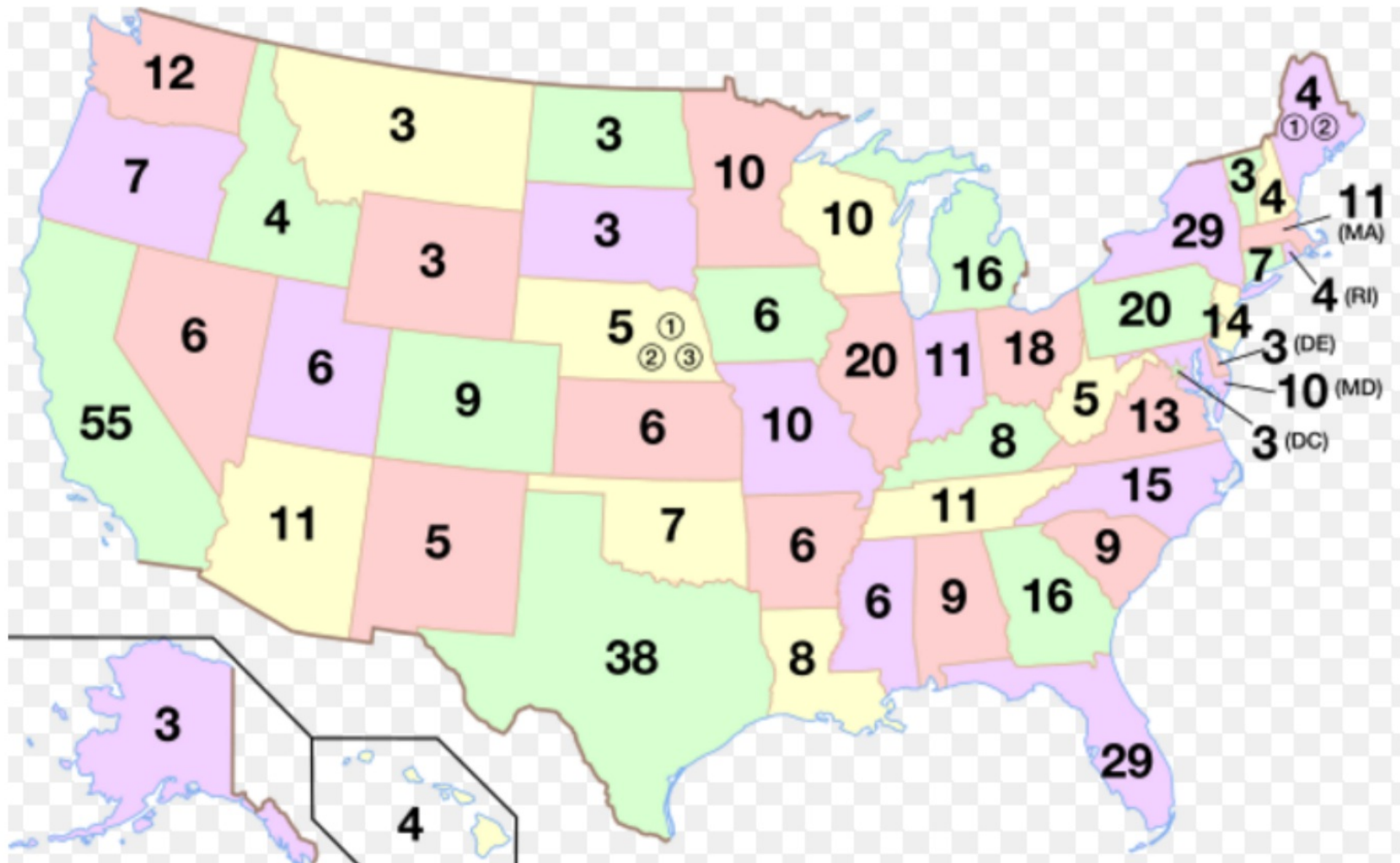
- 1) Find ideal ratio (IR)** (divide total population by number of representatives)
- 2) Determine group quotas** (divide group population by IR)
- 3) Assign initial representatives**
Hamilton/Jefferson: truncate (drop decimal)
Webster/Hill: use arithmetic/geometric mean
- 4) Choose method of apportionment and adjust:**
Hamilton Method (largest decimal part) -1790
Divisor Methods: use adjusted ratios (modifiers) to find CLOSEST to ideal ratio
Jefferson Method (round up) 1790-1842, 1852-1901
Webster Method (arithmetic mean) 1842-1852, 1901-1941
Hill Method (geometric mean) 1941-

Problems/Errors:

- 1) Paradoxes** (can exist with Hamilton)
- 2) Violation of quotas** (can exist with Webster and Hill)

538 Total Electoral Votes

435, US House; 100, US Senate; 3, D.C.



Fair or not???

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Populations

US: 308,700,000

CA: 37,253,956

WY: 563,626

IR: 709,655

Quotas:

CA: 52.50 -> 52

WY: .79 -> 1

Hill Adjusted Ratio:

CA: 709,631

WY: ?

Is the Hill Apportionment method fair?