

Definitions:**Seats:****House size:****States:****State's population:****Total population:****Natural divisor:****Natural quota:****Fractional part:****Hamilton's Method****Relative fractional part:**

Lowndes' Method:**The Quota Property:****Examples:**

Hamilton's Method: A city has 21 fire trucks that are to be assigned to one of the five fire stations. The new fire chief decides to allocate the trucks to stations in proportion to the number of fires reported in each station's district over the last three months, given in the table below. Apportion the fire trucks using Hamilton's method.

Station	Number of Fires	Natural Quota	Initial Allocation	Final Allocation
1	154			
2	83			
3	129			
4	217			
5	103			
Total	686			

Lowndes' Method: (pg. 79) In 1790 Delaware was composed of three counties, as it is today. The populations of these counties based on the 1790 census are listed below. Use Lowndes' method to apportion a hypothetical state legislature of 76 seats among these counties.

County	Population	Natural Quota	Initial Allocation	Relative Fractional Part	Final Allocation
Kent	18,920				
New Castle	19,686				
Sussex	20,488				
Total	59,094				

Now repeat the above example using Hamilton's method.

County	Population	Natural Quota	Initial Allocation	Final Allocation
Kent	18,920			
New Castle	19,686			
Sussex	20,488			
Total	59,094			
