## Discrete Mathematics

Name:		
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## **Directions**

Match each Definition/Term/Concept with the correct vocabulary word from the word bank below. The terms in the word bank *may* be used more than one time, or not at all.

Word Bank			
Hamilton Method	Adams Method	Fair Division	
Jefferson Method	Webster Method	The Ouota Rule	

Question Number	Definition/Term/Concept	Vocabulary Word
1	Apportionment method: The given total number of seats is to be apportioned between several states proportionally to their populations. To accomplish that task  1. Compute the divisor D = (Total population)/(Number of seats)  2. Modify D by an amount d, that could be negative, such that when state allocations {(State population)/(D + d)} are rounded in the customary manner, they add up to the exact number of seats.	
2	Apportionment method: The given total number of seats is to be apportioned between several states proportionally to their populations. To accomplish that task  1. Compute the divisor D = (Total population)/(Number of seats)  2. Decrease D by an amount d such that when state allocations {(State population)/(D - d)} are rounded downward, they add up to the exact number of seats.	
3	A state's apportionment should be either its upper quota or its lower quota. An apportionment method that guarantees that this will happen is said to satisfy this rule.	
4	<ol> <li>Apportionment method:         <ol> <li>Compute the divisor D = (Total population)/(Number of seats)</li> <li>Find and round down state quotas {(State population)/D}. The leftover fractional parts add up to a whole number of seats.</li> </ol> </li> <li>Distribute the surplus seats, one per state, starting with the largest leftover fractional part, then proceeding to the next largest, and so on, until all the surplus seats have been dealt with.</li> </ol>	
5	Apportionment method: The given total number of seats is to be apportioned between several states proportionally to their populations. To accomplish that task  1. Compute the divisor D = (Total population)/(Number of seats)  2. Increase D by an amount d such that when state allocations {(State population)/(D + d)} are rounded upward, they add up to the exact number of seats.	
6	In general, this method is biased in favor of larger states and against smaller ones. It violates what is called the "Quota Rule."	
7	Apportionment method leads to the so called paradoxes: Alabama paradox, population paradox, new-states paradox.	