

Apportionment Activity (2019)

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After the census in 2020 the 435 seats in the House of Representatives will have to be apportioned among the 50 States based on their populations. When Great Britain leaves the European Union (assuming this happens) the European Parliament will have to be reapportioned because a large, economically strong country will no longer be present. This, "toy" problem is designed to raise the issues that are involved in the "real world" versions of this type of question.

1. Suppose we have three "states" A, B, and C with populations 50, 80, and 70 to which we want to assign a non-negative integer number of seats in a "parliament" (legislature) which has size h (for house size) where h equals 11 seats. How many seats should be given to each state?
2. Abstract the method which you used to answer the question above and apply the same method had there been 12 seats to assign to the states ($h=12$).
3. What fairness rules do you think a method for assigning seats to states in a situation such as this should obey?
4. Can you think of other methods other than the one you used that could be used to solve problems of this kind?
5. Can you think of other problems similar to assigning states seats in a legislature based on their populations that the method you used to solve the legislative apportionment problem above might be applied to?