

MA 110 Quiz 6 **ANSWERS**

The legislature of a country has 150 seats to be apportioned among four states A, B, C, and D, in proportion to their populations. The table below shows the populations of the states. Complete the table by filling in all **unshaded** blanks in order to produce each of the apportionments indicated: Webster's, Jefferson's, and Adams'. [Hints: You need to find the total population in order to find the standard divisor. You may have to do some trial and error scratch work on the reverse in order to determine the appropriate modified divisor and modified quotas. Be sure to transfer your work to be graded to this page.]

| State | A | B | C | D | Total | Points |
|------------------|--------|------------------|--------|-------|--------|--------|
| Population | 11,481 | 7,940 | 3,169 | 1,410 | 24,000 | 1 |
| Standard Divisor | 160 | | | | | |
| Standard Quotas | 71.756 | 49.625 | 19.806 | 8.813 | 150.00 | |
| Modified Divisor | 158 | 157.3 to 158.4 | | | | 2 |
| Modified Quota | 72.665 | 50.253 | 20.057 | 8.924 | | |
| Jefferson App't | 72 | 50 | 20 | 8 | 150 | |
| Modified Divisor | 162 | 161.8 to 162.0 | | | | 2 |
| Modified Quota | 70.870 | 49.012 | 19.562 | 8.704 | | |
| Adams App't | 71 | 50 | 20 | 9 | 150 | |
| Modified Divisor | 160.5 | 160.41 to 160.57 | | | | 2 |
| Modified Quota | 71.533 | 49.470 | 19.745 | 8.785 | | |
| Webster App't | 72 | 49 | 20 | 9 | 150 | |

Did any of the apportionments above violate the Quota Rule? If so, indicate which apportionment, which state, and whether the upper quota or the lower quota was violated.

No violations of the quota rule.

[1]

Print Code: _____

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|------------------|--------|-------|-------|-------|-------|
| Population | 11,481 | 7,940 | 3,169 | 1,410 | |
| Standard Divisor | | | | | |
| Standard Quotas | | | | | |
| Modified Divisor | | | | | |
| Modified Quota | | | | | |
| ? App't | | | | | |
| Modified Divisor | | | | | |
| Modified Quota | | | | | |
| ? App't | | | | | |
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| Modified Divisor | | | | | |
| Modified Quota | | | | | |
| ? App't | | | | | |