

## MAT 118, Chapter 4 Sample Questions

- (1)  What is the current method to apportion seats in the House of Representatives?
- (a) Hamilton
  - (b) Huntington-Hill
  - (c) Jefferson
  - (d) Webster
  - (e) Adams
  - (f) none of these
- (2)  In what year did Congress establish the current size (435) of the House of Representatives?
- (a) 1872
  - (b) 1890
  - (c) 1901
  - (d) 1941
  - (e) 1990
  - (f) none of these
- (3)  Under Hamilton's method a state whose population grows can lose a seat to a state whose population stays the same (or grows less). This is called the
- (a) Alabama paradox
  - (b) Maine paradox
  - (c) Population paradox
  - (d) Hamilton's paradox
  - (e) The growth paradox
  - (f) none of these

Use this table for the remaining problems. Suppose a country has five states called A,B,C,D,E with populations 10,33,27,25,50 million respectively. Below is a table of these populations divided by various divisors. The first column is the divisor in million. The next The last three columns are the sums of the lower quota, rounded quota and upper quota

Divisor	A	B	C	D	E	Jeff.	Web.	Adams
1.00	10.00	33.00	27.00	25.00	50.00	145	145	145
1.01	9.90	32.67	26.73	24.75	49.50	140	145	145
1.02	9.80	32.35	26.47	24.51	49.02	140	142	145
1.03	9.70	32.04	26.21	24.27	48.54	139	141	144
1.04	9.61	31.73	25.96	24.04	48.08	137	140	142
1.05	9.52	31.43	25.71	23.81	47.62	135	139	140

- (4)  What divisor (in millions) do we choose to use Webster's method to apportion 142 seats?
- (a) 1.00  
 (b) 1.01  
 (c) 1.02  
 (d) 1.03  
 (e) 1.04  
 (f) none of these
- (5)  If Adams method is applied to apportion 140 seats between the states, the number of seats states A,B,C,D,E receive is
- (a) 9,31,25,23,47  
 (b) 10,31,26,24,48  
 (c) 10,32,26,24,48  
 (d) 10,31,27,25, 47  
 (e) 9,32,25,24,48  
 (f) none of these
- (6)  Suppose Adams method is used to apportion 144 seats and then one extra seat is added (to make 145). Which state gets the extra seat (using Adams method again)?
- (a) A  
 (b) B  
 (c) C  
 (d) D  
 (e) E  
 (f) none of these