

MAT 100 Homework #9 Key

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1. a. 710,000

b. The # of people represented by each Congressional seat (avg)

c. 53.597 LQ = 53 UQ = 54

d. 16.53 LQ = 16 UQ = 17

e. 0.811 LQ = 0 UQ = 1 ← can't get less than 1

Subject	Pop	SQ	LQ	UQ	Extra	Final App
Pre-College Alg	5017	287.738	287	287	+1	288
College Alg	763	43.760	43	43	+1	44
Trig	408	23.3998	23	23		23
Calculus	656	37.623	37	37	+1	38
Stats	1002	57.467	57	57		57
	<u>7846</u>		<u>447</u>			<u>450 sections</u>

Hamilton's above

$\frac{7846}{450} = 17.436$ Students per section

d. UQ 288, 44, 24, 38, 58

e. Modified Divisor = 17.33

MQ's 289.5, 44.028, 23.543, 37.853, 57.819

round down for Apportionment: $289 + 44 + 23 + 37 + 58 = 450$

→ quota violation

f. Webster's → Round normally gives same result as Hamilton's

	Pop	SQ	LQ	UQ	Geom Mean	Final App
Pre-Coll Alg	5017	287.738	287	288	287.49856	288
Coll. Alg	763	43.76	43	44	43.497..	44
Trig	408	23.40	23	24	23.49468	23
Calc	656	37.62	37	38	37.4966665	38
Stats	1002	57.47	57	58	57.4978	57
	<u>7846</u>					