

Instructions: Show all work. Round each decimal value to three places.

1. Use Hamilton's Method to apportion 35 employees among the 4 work shifts according to the table below. Be sure to indicate clearly your standard divisor and your final apportionment.

Shift	# of Cars	Quota	Lower Quota	Upper Quota	Surplus Seat	Apportionment
A	20,508	4.406	4	5	1	5
B	9,542	2.050	2	3	0	2
C	98,466	21.153	21	22	0	21
D	34,426	7.395	7	8	0	7
Standard Divisor:	4655					

$$\text{total} = 162,942$$

$$\text{SD} = 4655.486 \Rightarrow 4655$$



$$34 \Rightarrow 1 \text{ surplus}$$

highest decimal is shift A



35 total

2. Describe the Alabama Paradox. How does it differ from the New States Paradox?

The Alabama paradox happens when 2 apportionments for the same # of states are changed to admit more seats but in the process one state loses a seat.

The new states paradox happens when both seats are increased for the new states and new states are added. Here, changes to the other states occur even when the new seats were added so that they should allow no changes.