21. (2.75 points)

Given the following information:

Accident	Cumulative Closed Claim Counts			
Year	12 Months	24 Months	36 Months	48 Months
2009	250	400	450	500
2010	225	360	405	
2011	250	500		
2012	175			

Accident	Cumulative Paid Claims ($000)			
Year	12 Months	24 Months	36 Months	48 Months
2009	$2,000	$2,800	$4,340	$5,425
2010	$2,100	$3,360	$4,872	
2011	$2,000	$3,750		
2012	$1,600			

Accident	Ultimate
Year	Claim Counts
2009	500
2010	450
2011	625
2012	700

Assume no further development after 48 months.

Using the Berquist-Sherman paid adjustment to the paid claim development technique, estimate the ultimate claims for accident year 2012 as of December 31, 2012. Use linear interpolation to calculate adjusted paid claims.

Exam 5 – Question #21

1. Disposal rate

AY	12	24	36	48
2009	0.5	0.8	0.9	1
2010	0.5	0.8	0.9	
2011	0.4	0.8		
2012	0.25			

Observe slow down of claim closure at 12 mos., take latest CY disposal rate.

2. Adj . cumulative paid claim

AY	12	24	36	48
2009	1000	2800	4340	48
2010	1050	3360	4872	
2011	1250	3750		
2012	1600			

Ex 1250 = (2000 – 0) / (.4 – 0) *.25
Age 24 on not adjusted cause no change in disposal rates

3. Paid development

	12-24	24-36	36-48	48-ult.
Age to age	3.003	1.495	1.25	1.0
Ult.	5.614	1.869	1.25	1.0

AY 2012 ult. = 1600 x 5.614 = 8982.4k

19.

Candidates did not do well on this question, often providing insufficient detail to receive full credit.

a. Many candidates did mention that the ultimate losses would increase. However, a common mistake was not to explain appropriately how this would lead to higher ALAE (it is the application of the historical paid to paid ratio to the overstated ultimate that produces the overstated ALAE result). Another common error was to focus just on the paid to paid ratio, but neglect that the paid ultimate is going to be significantly higher.

b. Most candidates did not receive credit for this part.

c. This part was generally answered quite well. The most common error was to indicate that the ultimate losses/ pure premium increased, but not mention anything about the rates themselves increasing.

d. This was also answered quite well. A common error was a lack of detail, with credit lost if candidates did not mention the fact that the retention was exceeded or that the limit had not yet been reached.

20.

Candidates were able to handle the basic component of the Cape Cod method but struggled with the adjustments. Some common mistakes were:

- Forgot to adjust the estimated claim ratio to bring it to the 2011 level.
- Used the reported CDF to ultimate factor to adjust the reported claims to ultimate, which produces the same yearly adjusted ECRs but causes an error in the volume weighting in the total.
- Not utilizing the concept of used-up premium which is central to this method.
- Candidates misapplied the pure premium trend and tort reform factors to the earned premium instead of the claims or didn't apply them at all.
- Providing expected ultimate claims as the answer instead of IBNR or provided IBNR for an accident year other than 2011.
- Not calculating IBNR by applying the unreported percentage to the expected ultimate claims. The typical error was subtracting the reported claims or adjusted claims from the expected ultimate claims instead.

21.

Most candidates correctly calculated the disposal rate as well as implementing the LDF method (link ratios, selecting LDFs, calculating CDF, and applying it to the appropriate paid dollars). Candidates had trouble with interpolating for age 12, while many candidates realized that ages 24-48 did not need to be adjusted. The most common errors were:

- Incorrectly interpolating age 12.
- Calculating incremental paids and adding periods together to get to the ultimate.