

20. (2.25 points)

Given the following data evaluated as of December 31, 2016:

Accident Year	Cumulative Paid Claims (\$000) as of (months)			
	12	24	36	48
2013	300	550	647	700
2014	500	979	Not Provided	
2015	400	825		
2016	450			

Accident Year	Cumulative Reported Claims (\$000) as of (months)			
	12	24	36	48
2013	500	660	700	700
2014	750	900	1,150	
2015	640	810		
2016	700			

- There is no development on paid or reported claims after 48 months.
- The reported claim development technique projects IBNR that is \$50,000 lower than the IBNR projected by the paid claim development technique for accident year 2016.
- Age-to-age development factors are selected using an all year simple average.

Calculate the total claims paid in calendar year 2016 for all accident years.

**EXAM 5 SPRING 2017 SAMPLE ANSWERS AND EXAMINER'S REPORT**

QUESTION 20

TOTAL POINT VALUE: 2.25

LEARNING OBJECTIVE: B3

SAMPLE ANSWER

	Reported Claim Link Ratios		
	12-24	24-36	36-48
2013	1.32	1.06	1.00
2014	1.20	1.28	
2015	1.27		
All-Year Straight Average	1.26	1.17	1.00

  

	Paid Claim Link Ratios		
	12-24	24-36	36-48
2013	1.83	1.18	1.0819
2014	1.96	x / 979	
2015	2.06		
All-Year Straight Average	1.95	(1.18 + x / 979 ) / 2	1.08

AY 2016 Reported Development

CDF = 1.475374053

Ultimate(r) = 700 \* 1.475 = 1033

IBNR(r) = 1033 – 700 = 333

AY 2016 Paid Development

Ultimate(p) = 450 \* 1.95 \* (1.18 + x/979)/2 \* 1.08

IBNR(p) = 450 \* 1.95 \* (1.18 + x/979)/2 \* 1.08 - 700

IBNR(r)+ 50 = IBNR(p)

333 + 50 = 450 \* 1.95 \* (1.18 + x/979)/2 \* 1.08 - 700

Solve for x = 1080

Paid in calendar year 2016 = 450 + (825-400) + (1080-979) + (700-647) = 1029

EXAMINER'S REPORT

Candidates were expected to demonstrate paid and reported claims development method knowledge, understand what IBNR includes, and correctly calculate the incremental paid claims in calendar year 2016.

Common errors included:

- Calculating IBNR as (ultimate – paid) rather than (ultimate – reported).
- Mistaking the \$50,000 difference as the total across all accident years, rather than just accident year 2016.