

3. (2 points)

Given the following information about two claims:

Claim Number	Accident Date	Transaction Date	Incremental Payment	Ending Case Reserves
1	January 1, 2015	January 1, 2015	\$0	\$20,000
1	January 1, 2015	January 1, 2016	\$25,000	\$0
2	April 1, 2015	July 1, 2015	\$0	\$50,000
2	April 1, 2015	October 1, 2015	\$25,000	\$75,000
2	April 1, 2015	April 1, 2016	\$100,000	\$20,000

a. (0.5 point)

Calculate the incurred losses for accident year 2015 as of May 1, 2016.

b. (1 point)

Calculate the incurred losses for calendar year 2015 and calendar year 2016.

c. (0.5 point)

Briefly describe one advantage and one disadvantage of calendar year aggregation.

EXAM 5 SPRING 2017 SAMPLE ANSWERS AND EXAMINER'S REPORT

QUESTION 3	
TOTAL POINT VALUE: 2	LEARNING OBJECTIVE(S): A3
SAMPLE ANSWERS	
Part a: 0.5 point	
<p><u>Sample 1</u> Incurred = Paid + Change in Case Reserve $= (0 + (20,000 - 0)) + (25,000 + (0 - 20,000)) + (0 + (50,000 - 0)) + (25,000 + (75,000 - 50,000)) + 100,000 + (20,000 - 75,000) = 170,000$</p> <p><u>Sample 2</u> Claim 1 = $20,000 + (25,000 + (0 - 20,000)) = 25,000$ Claim 2 = $50,000 + (25,000 + (75,000 - 50,000)) + (100,000 + (20,000 - 75,000)) = 145,000$ Total = $25,000 + 145,000 = 170,000$</p> <p><u>Sample 3</u> Paid = $25,000 + 25,000 + 100,000 = 150,000$ Ending Case = $0 + 20,000 = 20,000$ Incurred = Paid + Ending Case = $150,000 + 20,000 = 170,000$</p>	
Part b: 1 point	
<p><u>Sample 1</u> CY 2015: $(0 + (20,000 - 0)) + (0 + (50,000 - 0)) + (25,000 + (75,000 - 50,000)) = 120,000$ CY 2016: $(25,000 + (0 - 20,000)) + (100,000 + (20,000 - 75,000)) = 50,000$</p> <p><u>Sample 2</u> CY 2015: Claim 1 = 20,000; Claim 2 = $50,000 + 25,000 + (75,000 - 50,000) = 100,000$ Total = $20,000 + 100,000 = 120,000$ CY 2016: Claim 1 = $25,000 + (0 - 20,000) = 5,000$; Claim 2 = $100,000 + (20,000 - 75,000) = 45,000$ Total = $5,000 + 45,000 = 50,000$</p>	
Part c: 0.5 point	
<p><u>Sample Responses for "advantages":</u></p> <ul style="list-style-type: none"> • Data is known at the end of the year (very responsive) • There is no development after CY is over so it is the quickest to finish, can use latest CY data • CY data is finalized at 12/31/yy so data is static and good for year-end financial reporting <p><u>Sample Responses for "disadvantages":</u></p> <ul style="list-style-type: none"> • Poor match of premium to losses • Does not perfectly match premium to losses • Doesn't allow losses to develop, may not be appropriate for long-tailed lines of business • Not useful in estimating IBNR 	

EXAM 5 SPRING 2017 SAMPLE ANSWERS AND EXAMINER'S REPORT

EXAMINER'S REPORT
Candidates were expected to understand how to calculate incurred losses by calendar year and accident year. They were also expected to understand an advantage and a disadvantage of calendar year aggregation.
Part a
Candidates were expected to know the definition of incurred loss as well as how to aggregate losses by accident year. A common error was an incorrect calculation of ending case reserve.
Part b
Candidates were expected to know the definition of incurred loss as well as how to aggregate losses by calendar years. Common errors included: <ul style="list-style-type: none">• Only calculating one calendar year instead of both.• Adding in the ending case reserve without subtracting out the prior case balance.• Not realizing that the beginning case reserve for both claims were zero at the start of the first calendar year.
Part c
Candidates were expected to know an advantage and a disadvantage of calendar year aggregation. Common errors included: <ul style="list-style-type: none">• Only giving one response (either advantage or disadvantage) but not both.• Saying there was a mismatch of premium but not saying what it was mismatched with (losses).• Saying there was no development as a disadvantage but not describing why.