

15. (1.5 points)

The following table shows all claims transactions for an insurance company through December 31, 2014.

Claim ID	Accident Date	Report Date	Transaction Date	Incremental Payment	Ending Case Reserves
1	January 1, 2011	January 1, 2011	January 31, 2011	100	100
1			March 2, 2011	100	50
1			April 1, 2011	25	0
2	June 30, 2011	March 15, 2012	June 30, 2012	0	10,000
2			May 25, 2013	250	10,000
2			June 30, 2014	15,000	1,000
2			September 12, 2014	200	0
3	February 25, 2012	March 15, 2012	March 15, 2012	0	0
3			January 15, 2013	0	1,000
3			July 15, 2013	2,500	0

- All three claims are closed as of December 31, 2014.

a. (0.75 point)

Construct the cumulative reported claims triangle on an accident year basis.

b. (0.75 point)

Construct the cumulative reported claims triangle on a report year basis.

EXAM 5 SPRING 2015 SAMPLE ANSWERS AND EXAMINER'S REPORT

QUESTION: 15

TOTAL POINT VALUE: 1.5

LEARNING OBJECTIVE(S): B2

SAMPLE/ACCEPTED ANSWERS:

Part a: 0.75 point

Sample 1:

AY	Cumulative Reported Claims			
	12	24	36	48
2011	225	10,225	10,475	15,675
2012	0	2,500	2,500	

Support

Claim 1: AY 2011

@ 12 months: $100 + 100 + 25 = 225$

@ 24 months: 225

@ 36 : 225

@ 48 : 225

Claim 2: AY 2011

@ 12 months: 0

@ 24 months: 10,000

@ 36 months: $250 + 10,000 = 10,250$

@ 48 : $250 + 15,000 + 200 = 15,450$

Claim 3: AY 2012

@ 12: 0

@ 24 : 2,500

@ 36 : 2,500

EXAM 5 SPRING 2015 SAMPLE ANSWERS AND EXAMINER'S REPORT

Sample 2:

Cumulative Paid Claims				
AY	12	24	36	48
2011	225	225	475	15,675
2012	0	2,500	2,500	
2013	0	0		
2014	0			

Case O/S

AY	12	24	36	48
2011	0	10,000	10,000	0
2012	0	0	0	
2013	0	0		
2014	0			

Cumulative Reported Claims

AY	12	24	36	48
2011	225	10,225	10,475	15,675
2012	0	2,500	2,500	
2013	0	0		
2014	0			

Sample 3:

Cumulative Reported Claims

Accident Year	12	24	36	48
2011	225	10,225	10,475	15,675
2012	0	2,500	2,500	
2013	0	0		
2014	0			

$$225 = 100 + 100 + 25 + (0-0)$$

$$10,225 = 225 + (10,000 - 0)$$

$$10,475 = 10,225 + 250 + (10,000 - 10,000)$$

$$15,675 = 10,475 + 15,000 + 200 + (0 - 10,000)$$

$$2500 = 2500$$

EXAM 5 SPRING 2015 SAMPLE ANSWERS AND EXAMINER'S REPORT

Part b: 0.75 point

Sample 1:

Cumulative Reported Claims				
RY	12	24	36	48
2011	225	225	225	225
2012	10,000	12,750	17,950	

Support

Claim 1: same as AY transactions

Claim 2: RY 12

@ 12: 10,000

@ 24 : 10,250

@ 36 : 15,450

Claim 3: RY 12

@ 12: 0

@ 24 : 2,500

@ 36 : 2,500

Sample 2:

Cumulative Paid Claims				
RY	12	24	36	48
2011	225	225	225	225
2012	0	2,750	17,950	
2013	0	0		
2014	0			

Case O/S

RY	12	24	36	48
2011	0	0	0	0
2012	10,000	10,000	0	
2013	0	0		
2014	0			

Cumulative Reported Claims

RY	12	24	36	48
2011	225	225	225	225
2012	10,000	12,750	17,950	
2013	0	0		
2014	0			

EXAM 5 SPRING 2015 SAMPLE ANSWERS AND EXAMINER'S REPORT

Sample 3:

Cumulative Reported Claims

Report Year	12	24	36	48
2011	225	225	225	225
2012	10,000	12,750	17,950	
2013	0	0		
2014	0			

$$225 = 100 + 100 + 25 + (0-0)$$

$$10,000 = 0 + 0 + 10,000$$

$$12,750 = 10,000 + 2,500 + 250$$

$$17,950 = 12,750 + 15,000 + 200 - 10,000$$

EXAMINER'S REPORT:

General Commentary

Candidates were expected to know the differences between an accident year and report year, how to calculate reported claim amounts given transactional paid and case reserve information, and how to construct a triangle. Candidates generally performed well on this question.

Part a

The candidate was expected to know how claims are assigned to an accident year, how to calculate cumulative reported claim amounts given transactional paid and case reserve information, and how to construct a triangle.

Common mistakes were:

- Ignoring that Accident Year 2012 is 36 months old and not including a loss amount at that age in the triangle or including an amount at age 48 for that accident year
- Calculating age 24 for Accident Year 2012 as 1,000 by using just the case reserves rather than adding the case reserves to the cumulative payments
- Calculating age 24 or 36 for Accident Year 2012 as 3,500 by adding the case reserves to the incremental payment from two separate transactions on claim #3

Part b

The candidate was expected to know how claims are assigned to a report year, how to calculate cumulative reported claim amounts given transactional paid and case reserve information, and how to construct a triangle.

EXAM 5 SPRING 2015 SAMPLE ANSWERS AND EXAMINER'S REPORT

Common mistakes were:

- Calculating age 24 for Report Year 2012 as 13,750 by not accounting for the second transaction in 2013 on claim #3
- Calculating age 24 for Report Year 2012 as 11,250 by not accounting for the second transaction in 2013 on claim #3.
- Calculating Report Year 2011 as 275 by not accounting for the third transaction in 2011 on claim #1