

15. (2.75 points)

Given the following:

Claim ID	Accident Date	Transaction Date	Gross Amount Paid on Transaction Date (\$)	Gross Ending Case Outstanding (\$)
A	May 30, 2015	December 24, 2015	1,000	550
		August 1, 2016	500	225
		June 1, 2017	725	0
B	August 28, 2015	August 29, 2015	300	1,050
		February 6, 2016	600	375
		June 14, 2016	450	150
C	April 21, 2016	April 25, 2016	1,200	575
		March 3, 2017	700	250
		December 1, 2017	200	0
D	October 11, 2016	October 12, 2016	400	900
		May 17, 2017	800	625

60%	Quota share ceded percentage for reinsurance that applies to claims occurring in 2015.
\$1,500	Per claim excess of loss retention for reinsurance that applies to claims occurring in 2016.

a. (0.25 point)

Calculate calendar year 2015 reported claims, gross of reinsurance.

b. (0.75 point)

Calculate calendar year 2016 paid claims, net of reinsurance.

c. (0.75 point)

Calculate calendar year 2016 reported claims, gross of reinsurance.

d. (1 point)

Calculate calendar year 2017 reported claims, net of reinsurance.

EXAM 5 FALL 2018 SAMPLE ANSWERS AND EXAMINER'S REPORT

QUESTION 15

TOTAL POINT VALUE: 2.75

LEARNING OBJECTIVE: B1, B4

SAMPLE ANSWERS

Part a: 0.25 point

Sample 1

Claim A: $1,000 + 550 = 1,550$

Claim B: $300 + 1,050 = 1,350$

Total = 2,900

Sample 2

Payments: $1,000 + 300 = 1,300$

Change in Case Reserves: $(550 - 0) + (1,050 - 0) = 1,600$

Total = 2,900

Part b: 0.75 point

Sample 1

CY 2016 Net Paid = $500 * 0.4 + 1,050 * 0.4 + 1200 + 400 = 2,220$

Sample 2

Claim	Gross Paid	Reinsurance	Paid in CY16 Net
A	500	$500 * 0.6 = 300$	$500 - 300 = 200$
B	$600 + 450 = 1,050$	$1,050 * 0.6 = 630$	$1,050 - 630 = 420$
C	1,200	0	1,200
D	400	0	400
Total			2,220

Sample 3

CY 2016 Net Paid = $(1 - 0.6) * [500 + 600 + 450] + \min(1,200, 1,500) + \min(400, 1,500) = 2,220$

Part c: 0.75 point

Sample 1

A: $(500 + 225 - 550) = 175$

B: $(600 + 450 + 150 - 1050) = 150$

C: $(1200 + 575) = 1775$

D: $(400 + 900) = 1300$

Total = 3,400

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Sample 2

CY 2016 Paid Claims = $(500 + 600 + 450 + 1200 + 400) = 3,150$

CY 2016 Change in Case Reserves:

A = $225 - 550 = -325$

B = $150 - 1050 = -900$

C = 575

D = 900

Total CY 2016 Change in Case Reserves = $-325 - 900 + 575 + 900 = 250$

Total CY 2016 Reported Claims = CY 2016 Paid + CY 2016 Change in Case Reserves
= $3,150 + 250 = 3,400$

Part d: 1 point

Sample 1

A: $0.4 * (725 - 225) = 200$

B: No incurred claims in CY 2017. 0

C: Retention limit reached in CY 2016. 0

D: 1300 incurred at start of CY 2017.

Gross incurred at end of CY 2017 = $1300 + 800 + (625 - 900) = 1,825$

Since Excess of Loss limit reached, net incurred = $1500 - 1300 = 200$

Total = $200 + 0 + 0 + 200 = 400$

Sample 2

Claim	CY 2017 Gross Reported	CY 2017 Reinsurance Ceded	CY 2017 Net Reported
A	$725 + (0 - 225) = 500$	$0.6 * (725 - 225) = 300$	$500 - 300 = 200$
B	0	0	0
C	$700 + 200 + (0 - 575) = 325$	$*(1200 + 700 + 200 - 1500 - (1200 + 575 - 1500)) = 325$	$325 - 325 = 0$
D	$800 + (625 - 900) = 525$	$400 + 800 + 625 - 1500 = 325$	$525 - 325 = 200$
Total			400

*CY 2017 Reinsurance Ceded for Claim C = Total Ceded – CY 2016 Ceded = CY 2017 Ceded

EXAMINER'S REPORT

Candidates were expected to understand the basic mechanics of case outstanding, paid claims, reported claims in relation to both Accident Year and Calendar Year. The candidate was also expected to demonstrate basic knowledge of reinsurance.

Part a

Candidates were expected to understand how to derive total reported claims for a specific Calendar Year when given a list of paid and case outstanding claim data.

Common mistakes include:

EXAM 5 FALL 2018 SAMPLE ANSWERS AND EXAMINER'S REPORT

- Calculation errors when summing paid and change in case
- Incorporating reinsurance calculations into the final answer

Part b

Candidates were expected to understand how to derive total gross paid claims for a specific Calendar Year and then apply both quota share and excess of loss reinsurance where appropriate.

Common mistakes include:

- Calculation errors when summing net paid claims
- Forgetting to incorporate reinsurance and only calculating gross paid claims
- Multiplying gross paid claims by 0.6 rather than 0.4

Part c

Candidates were expected to understand how to calculate reported claims for a specific Calendar Year. Candidates did not receive full credit if they did not take into account change in case reserves for claims A and B.

Common mistakes include:

- Not including change in case reserves when calculating reported amounts for claims A and B.
- Unnecessarily applying reinsurance to paid or reported claims.
- Calculation errors in summing up total reported for claims A or B when taking case reserves into account.

Part d

Candidates were expected to understand how to calculate total reported claims in a given Calendar Year net of both Quota Share as well as Excess of Loss reinsurance.

Common mistakes include:

- Not applying or applying the wrong Quota Share to claim A.
- Not capping claims C and D at the 1,500 excess of loss limit.
- Incorrectly applying the 1,500 excess of loss limit on an aggregate claim basis.