

2. (2 points)

Given the following premium and loss information:

Premium Transactions					
Policy	Original Effective Date	Original Expiration Date	Transaction Effective Date	Full-Term Premium (\$)	Notes
A	July 1, 2016	June 30, 2017	July 1, 2016	800	Start of New Policy
A	July 1, 2016	June 30, 2017	April 1, 2017	400	Additional Premium for Endorsement
B	April 1, 2017	March 31, 2018	April 1, 2017	1,000	Start of New Policy
C	October 1, 2017	September 30, 2018	October 1, 2017	500	Start of New Policy
C	October 1, 2017	September 30, 2018	April 1, 2018	N/A	Policy Canceled

Loss Transactions			
Policy	Accident Date	Payment Date	Loss Payment (\$)
A	October 1, 2016	October 15, 2016	500
A	January 1, 2017	January 15, 2017	200
B	October 1, 2017	January 15, 2018	500
C	January 1, 2018	January 15, 2018	750

- Each claim is closed on the payment date.

a. (0.75 point)

Calculate the 2017 calendar year earned premium.

b. (1.25 points)

Calculate the 2017 policy year loss ratio evaluated at December 31, 2018.

EXAM 5 FALL 2018 SAMPLE ANSWERS AND EXAMINER'S REPORT

QUESTION 2													
TOTAL POINT VALUE: 2	LEARNING OBJECTIVE(S): A2, A3, A5												
SAMPLE ANSWERS													
Part a: 0.75 point													
<p><u>Sample 1</u></p> $800 \times 1/2 + 400 \times 3/12 + 1000 \times 9/12 + 500 \times 3/12 = 1375$													
<p><u>Sample 2</u></p> $\begin{aligned} \text{CY 2017 EP} &= 800 \times 3/12 + 1200 \times 3/12 + 1000 \times 9/12 + 500 \times 3/12 \\ &\quad (1/1 \text{ to } 3/31) \quad (4/1 \text{ to } 6/30) \quad (4/1 \text{ to } 12/31) \quad (10/1 \text{ to } 12/31) \\ &= 200+300+750+125 = 1375 \end{aligned}$													
Part b: 1.25 points													
<p><u>Sample 1</u></p> $\frac{500 + 750}{1000 + 500 \times 6/12} = 100\%$													
<p><u>Sample 2</u></p> <table><tr><td>Policy</td><td>PY 17 EP</td><td>Loss</td></tr><tr><td>A</td><td>0</td><td>0</td></tr><tr><td>B</td><td>1000</td><td>500</td></tr><tr><td>C</td><td>500 (.5) = 250</td><td>750</td></tr></table> <p>Loss Ratio = $(500 + 750) / (1000 + 250) = 1.00$</p>		Policy	PY 17 EP	Loss	A	0	0	B	1000	500	C	500 (.5) = 250	750
Policy	PY 17 EP	Loss											
A	0	0											
B	1000	500											
C	500 (.5) = 250	750											
EXAMINER'S REPORT													
<p>Candidates were expected to determine which premium transactions pertained to calendar year (CY) 2017, which premium and loss transactions pertained to policy year (PY) 2017, earn the CY premium, prorate the premium for the endorsement and cancellation where applicable, and calculate a PY loss ratio.</p>													
Part a													
<p>Candidates were expected to earn the Policy A, B and C premium transactions for CY 2017 based on their effective and expiration dates, prorating the full-term Policy A endorsement premium for the partial year that the endorsement was in effect, excluding the Policy C cancellation that was effective after CY 2017, and summing the earned premium from all policies for the total premium.</p> <p>Candidates did not receive credit for stating an assumption that the Policy A endorsement premium was already prorated, as the premium was identified in the question as "Full-Term Premium".</p>													

EXAM 5 FALL 2018 SAMPLE ANSWERS AND EXAMINER'S REPORT

Common mistakes include:

- Not prorating the full-term endorsement premium for Policy A
- Earning the Policy A premium and endorsement premium over the same time period

Part b

Candidates were expected to determine that only Policy B and C pertained to PY 2017, sum the premium and loss transactions for those policies, adjust the Policy C premium for the mid-year cancellation, and calculate the loss ratio.

Common mistakes include:

- Not recognizing the policy cancellation for Policy C
- Calculation more resembling calendar year than policy year