

6. (1 point)

Given the following information:

	Calendar Year 2014
Written premium	\$560.00
Earned premium	\$616.00
Commissions	\$67.20
Taxes, licenses and fees	\$19.60
General expenses	\$73.92
LAE ratio (to loss)	8.2%
Combined ratio	100%

Calculate the 2014 operating expense ratio.

EXAM 5 SAMPLE ANSWERS AND EXAMINER'S REPORT

QUESTION 6	
TOTAL POINT VALUE: 1	LEARNING OBJECTIVE: A4
SAMPLE ANSWERS	
<p><u>Sample Answer 1</u></p> <p>Let's calculate U/W expense ratio Commissions: $67.20/560=0.12$ Taxes, license, fee: $19.6/560=0.035$ General expenses: $73.92/616=0.12$ Now we need LAE/earned premium Combined ratio=100% $100\%=\text{loss ratio (LAE included)}+\text{UW expenses/written premium}$ Assuming for combined ratio that all expenses/UW are incurred at the policy inception (so written premium)</p> <p>$100\%=(\text{loss ratio})(1+0.082)+(67.2+19.6+73.92)/560$ Loss ratio: $0.713/1.082=0.659$ LAE/earned premium: $(0.659)(0.082)=0.054$ Operating expense ratio=LAE/earned premium+UW expense ratio: $0.054+0.12+0.035+0.12=0.329$</p> <p><u>Sample Answer 2</u></p> <p>Loss+LAE+UW+PROFIT=616 $1.082(\text{Loss})+67.20+19.60+73.92=616$ $455.28=1.082(\text{Loss})$ Loss=420.78</p> <p>Operating expense ratio: $(-420.78+616)/616=31.69\%$</p> <p><u>Sample Answer 3</u></p> <p>OP expense=UW exp+LAE GOE divide by EP, others by WP UW Exp Ratio: $(67.2+19.6)/560+73.92/616=27.5\%$ $100\%=L/R*1.082+27.5\%$ $L/R=67\%$ $\text{LAE}=67\%*0.082=5.494\%$ 2014 OP exp ratio: $5.494\%+27.5\%=32.994\%$ or 33%</p> <p><u>Sample Answer 4</u></p> <p>LAE/Loss=0.082 U/W ratio: $73.92/616+(67.2+19.6)/560=0.275$ Combine ratio: $.275+\text{Loss}/616+\text{LAE}/616=1$</p>	

EXAM 5 SAMPLE ANSWERS AND EXAMINER'S REPORT

Loss+LAE=446.6
Loss+.082loss=446.6
Loss=412.75
LAE=(412.75)(.082)=33.85
OER=LAE/EP+U/W ratio=33.85/616+.275
=.32995

Sample Answer 5

Combined ratio=Loss&LAE/Earned premium+(underwriting expenses)/written premium
100%=Loss*(1+8.2%)/616+(67.2+19.6+73.92)/560
Loss=405.92
2014 operating expense ratio=405*8.2%/616+(67.2+19.6+73.92)/560=34%

EXAMINER'S REPORT

The candidate was expected to be able to calculate underwriting expense ratio (UWER) using the provided information on underwriting expenses and premium, and to calculate the operational expense ratio (OER) using the UWER and the provided LAE-to-Loss ratio and combined ratio.

In general, the candidates did well on this question. Most calculated the UWER correctly, and either calculated the OER using the combined ratio minus the loss ratio or the underwriting expense ratio plus the LAE-to-EP ratio.

Common mistakes included:

- Calculating the UWER but calling it the OER
- Calculating the OER by adding the LAE-to-loss ratio to the UWER
- Multiplying the LAE-to-loss ratio by the loss and LAE-to-EP ratio to get the LAE-to-loss ratio, rather than multiplying it by only the loss ratio
- Dividing general expense by WP and commissions &/or TLF by WP, or dividing Loss &/or LAE by WP