17. (2.5 points)

Given the following information from an insurance company's Annual Statement:

Underwriting and Investment Exhibit

(all figures in millions of dollars)	**TOTAL - All Lines of Business**
Direct Written Premium	1,900
Prior Year Direct Written Premium	1,640
Net Written Premium	1,730
Prior Year Net Written Premium	1,370
Assumed Written Premium from Affiliates	220
Assumed Written Premium from Non-Affiliates	120

Liabilities, Surplus and Other Funds

Policyholders' Surplus	300

a. (2 points)

Calculate IRIS Ratios 1, 2, and 3 and indicate whether or not the values are unusual.

b. (0.5 point)

Assume that in the following year, IRIS Ratio 2 is outside the usual range of values. Describe a strategy the insurance company could implement to produce an IRIS Ratio 2 result that is not unusual.

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QUESTION 17	
TOTAL POINT VALUE: 2.5	**LEARNING OBJECTIVE: C2**

SAMPLE ANSWERS

Part a: 2 points

IRIS Ratio 1 is "Gross Premiums Written to Policyholders' Surplus"

- Result = 100 * (A + B + C) / D, where…
  - A = Direct Premiums Written
  - B = Reinsurance Assumed – Affiliates
  - C = Reinsurance Assumed – Non-Affiliates
  - D = Policyholders' Surplus
- Result = 100 * (1,900 + 220 + 120) / 300 = **746.7%**
- The usual range for the ratio includes results up to **900%;** this result is **usual**.

IRIS Ratio 2 is "Net Premiums Written to Policyholders' Surplus"

- Result = 100 * (A / B), where…
  - A = Net Premiums Written
  - B = Policyholders' Surplus
- Result = 100 * (1,730 / 300) = **576.7%**
- The usual range for the ratio includes results up to **300%**; this result is **unusual**.

IRIS Ratio 3 is "Change in Net Premiums Written"

- Result = 100 * (A – B) / B, where…
  - A = Net Premiums Written, Current Year
  - B = Net Premiums Written, Prior Year
- Result = 100 * (1,730 – 1,370) / 1,370 = **26.3%**
- The usual range for the ratio includes results from **-33% to +33%;** this result is **usual**.

Part b: 0.5 point

Sample answers include:

- The company could reduce their NWP by a variety of strategies: writing less business, securing new reinsurance, or lowering the retention (i.e. increase ceding) on their existing reinsurance
- The company could increase PHS by a variety of strategies: securing a higher ceding commission on their reinsurance, securing capital from a parent company, lowering expenses via layoffs, or lowering held reserves

EXAMINER'S REPORT

Candidates were expected to know and calculate IRIS ratios 1-3, interpret the results, and demonstrate understanding of the ratio components.

Part a

Candidates were expected to identify the components, accurately calculate the ratio, and indicate whether the calculated ratios produce unusual values for each of the three IRIS ratios.

Common errors include:

- Leaving out one or both of the assumed written premium amounts for Ratio 1
- Dividing by the current year NWP instead of prior year NWP for Ratio 3

Part b

Candidates were expected to identify a strategy that either lowered NWP, raised PHS, or both. The most common answer was to acquire more reinsurance, although all answers that correctly demonstrated a decrease to the numerator or an increase to the denominator were accepted.

Common errors include:

- Not knowing the definition of IRIS Ratio 2
- Erroneously suggesting a decrease to reinsurance