

5. (1.5 points)

Given the following to be used in developing a rate indication effective January 1, 2021:

- All policies are annual.
- Rates are expected to be in effect for one year.
- The selected annual loss trend is 2%.

a. (0.5 point)

Calculate the loss trend factor applied to losses from accident year 2018.

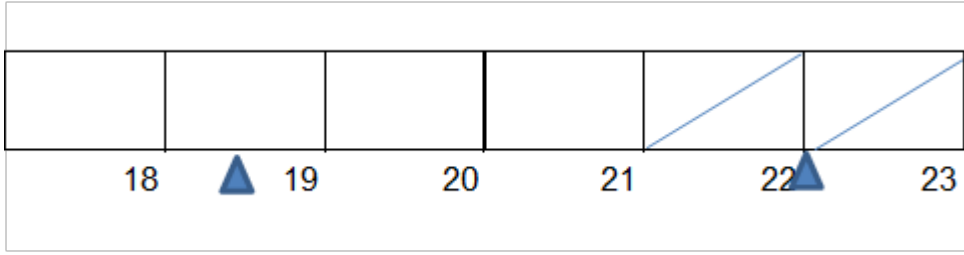
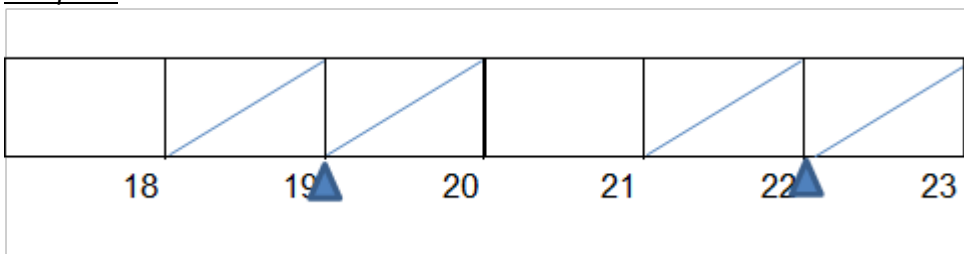
b. (0.5 point)

Calculate the loss trend factor applied to losses from policy year 2018.

c. (0.5 point)

Explain why trending and developing losses do not result in overlapping adjustments.

FALL 2019 EXAM 5 – SAMPLE ANSWERS AND EXAMINER’S REPORT

QUESTION 5	
TOTAL POINT VALUE: 1.5	LEARNING OBJECTIVE(S): A3
SAMPLE ANSWERS	
<b>Part a:</b> 0.5 point	
<p><u>Sample 1</u>  Trend from 7/1/18 to 1/1/22  Loss trend factor = <math>1.02^{3.5} = 1.072</math></p> <p><u>Sample 2</u>  Avg. future accident date = 1/1/2022  <math>1.02^{3.5} = 1.072</math></p> <p><u>Sample 3</u></p>  <p><math>1.02^{3.5} = 1.072</math></p>	
<b>Part b:</b> 0.5 point	
<p><u>Sample 1</u>  Trend from 1/1/19 to 1/1/22  Loss trend factor = <math>1.02^3 = 1.061</math></p> <p><u>Sample 2</u>  Avg. future accident date = 1/1/2022  <math>1.02^3 = 1.061</math></p> <p><u>Sample 3</u></p>  <p><math>1.02^3 = 1.061</math></p>	
<b>Part c:</b> 0.5 point	
<ul style="list-style-type: none"> <li>Development takes losses from current amounts to the final expected amount to be paid. Trending takes losses from a prior period and puts them in line with another, future period. They are making two different adjustments.</li> </ul>	

## FALL 2019 EXAM 5 – SAMPLE ANSWERS AND EXAMINER’S REPORT

- Developing losses brings losses to their ultimate value. Trending losses adjusts losses to reflect the cost levels for the future period.
- No overlap because developing losses brings them to their ultimate losses and trending brings them forward to future cost level.
- Developing losses takes the current reported/paid loss and projects how much will ultimately be paid to close all of the claims for a particular accident year. Trending takes the losses from a particular accident year and projects what they would be in a future time period.
- Developing losses brings losses to the ultimate amount that will be paid to cover and close all claims. Trending losses makes sure that the loss levels are reflective of loss cost levels of the future policy period being priced.

### EXAMINER’S REPORT

Candidates were expected to demonstrate knowledge of loss trends, in particular the dates used for trending, and the relationship between loss trend and loss development.

#### Part a

Candidates were expected to indicate the trend dates leading to a trend period, which should have been incorporated with the loss trend given (2%) to come to the loss trend factor.

Common mistakes included:

- Trending to the average written date of the prospective period (7/1/2021) instead of the average loss date.
- Stating that the trend is calculated from average earned dates instead of average loss dates.

#### Part b

Candidates were expected to indicate the trend dates leading to a trend period, which should have been incorporated with the loss trend given (2%) to come to the loss trend factor. Indicating that the trend end date was the same as part (a) was acceptable.

Common mistakes included:

- Trending to the average written date of the prospective period (7/1/2021) instead of the average loss date.
- Stating that the trend is calculated from average earned dates instead of average loss dates
- Incorrectly calculating the policy year 2018 average loss date or indicating that the average policy year loss date is the same as the average accident year loss date in part (a).

#### Part c

Candidates were expected to explain loss trend and loss development. Stating that trend and development do not overlap was not necessary, as this was given in the question.

Common mistakes included:

- Stating that trending and developing ensures rates are at the correct level.
- Stating that development is done on already trended losses or trending is done on already developed losses.
- Stating that development involves IBNR and trend involves inflation without further detail on why there is not overlap

## **FALL 2019 EXAM 5 – SAMPLE ANSWERS AND EXAMINER’S REPORT**

- Stating that trend evaluates an on-level ultimate.
- Describing trend as moving vertically through the loss triangle and development as moving horizontally through the loss triangle without sufficient additional explanation.