

Note to Reviewers: Author information is not displayed to preserve author anonymity.

INFORMED CONSENT

An Experimental Study Sponsored by the Foundation for Auditing Research

Principal investigator: [One author's name, institutional affiliation, address, and contact information].

Purpose

You have been invited to participate in a research study to increase our understanding of how auditors perform analytical procedures. Your participation is completely voluntary.

Discomforts, Stresses, Risks, and Benefits

No psychological, social, legal, economic, or physical risks are expected if you choose to participate in this study. The main risk is loss of confidentiality, which we minimize by collecting and handling all data according to standard confidentiality procedures. Taking part in the study is not expected to benefit you personally, but researchers and practitioners will learn new things that may improve decision making in auditing.

Procedures

This study involves an auditing case and follow up questions about what you would do in this situation. If you choose to participate, we expect that completing the case will take about 30 minutes. There are no costs associated with helping us with the study.

During the study, you may want to use either a calculator or the calculator on your phone or laptop to assist you in making any calculations. You may also want to use a pen and paper to assist you in taking notes.

Confidentiality

Your name will not be associated with any of the responses you give today. You are asked not to disclose any identifying information during the study. The results of the research study may be published, but neither your name nor any identifying information about you or your firm will be used. This research involves the transmission of data over the Internet. Every reasonable effort has been taken to ensure the effective use of available technology. However, we cannot provide absolute assurance of confidentiality during online communication.

Right to Refuse Participation or Withdraw

You do not have to take part in this study. If you start the study and decide that you do not want to finish, you may do so at any time. Refusing to participate or withdrawing at any time will not result in penalty.

Further Questions

The researchers will answer any further questions about the research and can be reached via the contact information above. Additional questions or problems regarding your rights as a research participant should be addressed to the Research Ethics Review Board [at the principal investigator's institution].

Statement of Consent

By proceeding, you are indicating that you understand the above information, and you are agreeing to participate in the above described research project. You may retain electronic and/or print a copy of this consent form to keep for your records.

I CONSENT to participate

I DO NOT CONSENT to participate

Note to Reviewers: If the participant clicks ‘I CONSENT to participate’, they will proceed to the next screen to begin. If the participant clicks ‘I DO NOT CONSENT to participate’, the study will end. i.e., the participant is directed to the last page of the study.

Next

----- Page Break -----

Note to Reviewers: The “Page Break” indicates the end of the current screen in the online version of the instrument. In the online version, participants click on the “Next” button to proceed with the study. Information on the following page(s) before the next “Page Break” would be on the next screen. This setup applies to the whole study. The ‘Page Break’ is only a note for reviewers and was not shown to participants.

ANALYTICAL PROCEDURES RESEARCH STUDY

INTRODUCTION

This study is designed to help us better understand how auditors make judgments and decisions, specifically in the area of substantive analytical procedures. You will be working on the study individually, so please do not talk about the study with your peers while completing the study.

The entire study will take approximately **30 minutes** to complete. **YOUR RESPONSES ARE 100% ANONYMOUS AND CONFIDENTIAL.** There are four stages to this study. In Stage 1 you will receive background information about a hypothetical client and then you will be directed to perform a substantive analytical procedure task. Stages 2, 3, and 4 will ask some questions about the case and about your audit practice experiences.

We ask that you fully complete your audit documentation and respond to all questions. Incomplete responses will limit the extent to which your work can contribute to the research study. It is very important that, given the information provided in this study, ***you respond as you would in practice.*** Finally, please complete this study in one sitting without interruption.

| |
|------|
| Next |
|------|

----- Page Break -----

STAGE 1: INFORMATION ABOUT THE RUITER AUDIT

Background:

You are an **in-charge/senior** for the 2021 audit of Ruiter B.V., a publicly traded manufacturing corporation. Your firm has audited Ruiter for the last 10 years and has issued unqualified (clean) audit opinions each year. This is your third year serving on the Ruiter engagement.

Your engagement team performed **interim substantive testing** at Ruiter in October of 2021. Your main responsibility was testing accounts related to Property Plant and Equipment (PP&E), including analytical procedures related to depreciation expense. During your tests, you noted inconsistencies in the useful lives employed by the company for several classes of PP&E. Specifically, useful lives had increased in the current year. The client supplied internal documentation to support the changes.

However, you deemed it appropriate to investigate further by requesting data from the PP&E manufacturers (with client management serving as a liaison) to support the changes. You also obtained industry/competitor data to support the changes in useful lives. Your test results indicated that the changes to useful lives were reasonable, and you identified no material misstatement in PP&E. However, your additional investigation at interim caused your cycle to go over budget.

You received an evaluation from your audit manager related to your interim testing at Ruiter. Evaluations range from 'Below Expectations' to 'Met Expectations' to 'Above Expectations'. Your audit manager evaluated your performance during interim testing as ***Met Expectations***.

This evaluation ***is consistent*** with the evaluations you have received in the past from your manager when you exceeded the cycle budget. However, this evaluation is ***lower than*** the evaluations you have received from your manager when you finished under budget.

| |
|-------------|
| Next |
|-------------|

----- Page Break -----

Your Task:

For the 31/12/2021 fiscal year-end substantive testing at Ruiter, your audit manager has assigned you to perform **substantive analytical procedures related to the company's sales accounts** and detail testing in the sales and collection cycle. Ruiter has 10 distinct divisions, one of which is *sporting goods*.

The 31/12/2021 *Sporting Goods Sales account* balance is **€45.372.585**. The 31/12/2021 assessment of the risk of material misstatement for the sales and collection cycle, as well as the overall fraud risk assessment for Ruiter are medium.

Your task is to **(1)** develop an *expectation* for Ruiter's *Sporting Goods Sales account*, **(2)** document how you developed the expectation, and **(3)** compare the expectation to the recorded balance.

Note to Reviewers: The question below was presented to all participants.

Take a moment to think about the general steps of performing substantive analytical procedures, as you would take in practice. Please briefly summarize and write down your thoughts in the space below.

On the next screen, you will find more detailed information and instructions for your task, as well as data and analyses for use in the development of your expectation.

Next

----- Page Break -----

Note to Reviewers: Only participants in the *Develop ADA* condition received the following information:

Your audit team recently introduced *data analytic visualizations* for the current year Ruiter audit. The costs (i.e., chargeable hours) of developing and using data analytics are charged to the cycle in which the data analytics are used.

Your audit manager asked **you** to *develop data analytic visualizations* for Ruiter's *Sporting Goods Sales account*. Your manager granted you control and freedom over how you will develop and use the visualizations.

Based on your initial consideration, this task includes determining the data sources, collecting the data, verifying data reliability, evaluating the calibration of the data in relation to predicting Ruiter Sporting Goods Sales, and setting up the visualizations.

Now, take a moment to think about how you would develop your visualizations related to your substantive analytical procedure for Ruiter's *Sporting Goods Sales account*. Please briefly summarize and write down your thoughts related to each of the following questions in the space below.

- 1) What data (e.g., prior year balances, industry trends) would you use in your visualizations to compare with Ruiter Sporting Goods Sales?

- 2) How many years of the data would you collect?

 years

- 3) Where would you get the data?

Next

----- Page Break -----

One week later

After extensive consideration, you have decided to use the following data to develop your visualizations to compare with Ruiter Sporting Goods Sales over the last five years:

- **Prior Years' Sales**
- **Ruiter B.V. Consolidated Sales**
- **Industry Sales Growth**
- **Non-Financial Measures**
- **Budgeted Sales**

You have spent **16 chargeable hours** determining the data sources, collecting the data, verifying data reliability, and evaluating the calibration of the data in relation to predicting Ruiter Sporting Goods Sales.

You have also charged **4 hours** (in addition to the previous 16 hours) determining the most appropriate form to set up your visualizations based on firm training materials and watching firm tutorials: You will use **line graphs**.

After these efforts, you have now come to the final step: Setting up your visualizations to use in relation to your substantive analytical procedure for Ruiter's *Sporting Goods Sales account*. Your visualizations include:

***Visualization 1**, Ruiter Sporting Goods: Current Year Sales vs. Prior Year Sales*

***Visualization 2**, Ruiter Sporting Goods Percentage of Consolidated Sales: Current Year vs. Prior Year*

***Visualization 3**, Annual Sales Growth: Ruiter Sporting Goods vs. Sporting Goods Industry*

***Visualization 4**, Ruiter Sporting Goods: Sales Growth vs. Average Change in Non-Financial Measures*

***Visualization 5**, Ruiter Sporting Goods: Current Year Sales vs. Budgeted Sales*

It is now time to set up your visualizations. Please proceed by downloading the Excel file provided where you will set up your ***Visualization 1***. Please use your ***best judgment*** to set up a **line graph** for your ***Visualization 1***.

Note: Setting up the visualization will take you about 5-10 minutes.

Please click the button below to **download** the Excel file and then **set up** your ***Visualization 1*** in this file. After finishing, please **save** your ***Visualization 1*** in the excel file.

Download Excel file

After finishing and saving your ***Visualization 1*** in the Excel file, please **upload** the Excel file back by using the two buttons in the space below: First, click "Choose file" to select the file. Then click "Upload bestand" to upload it.

Note to Reviewers: "Bestand" is "file" in Dutch.

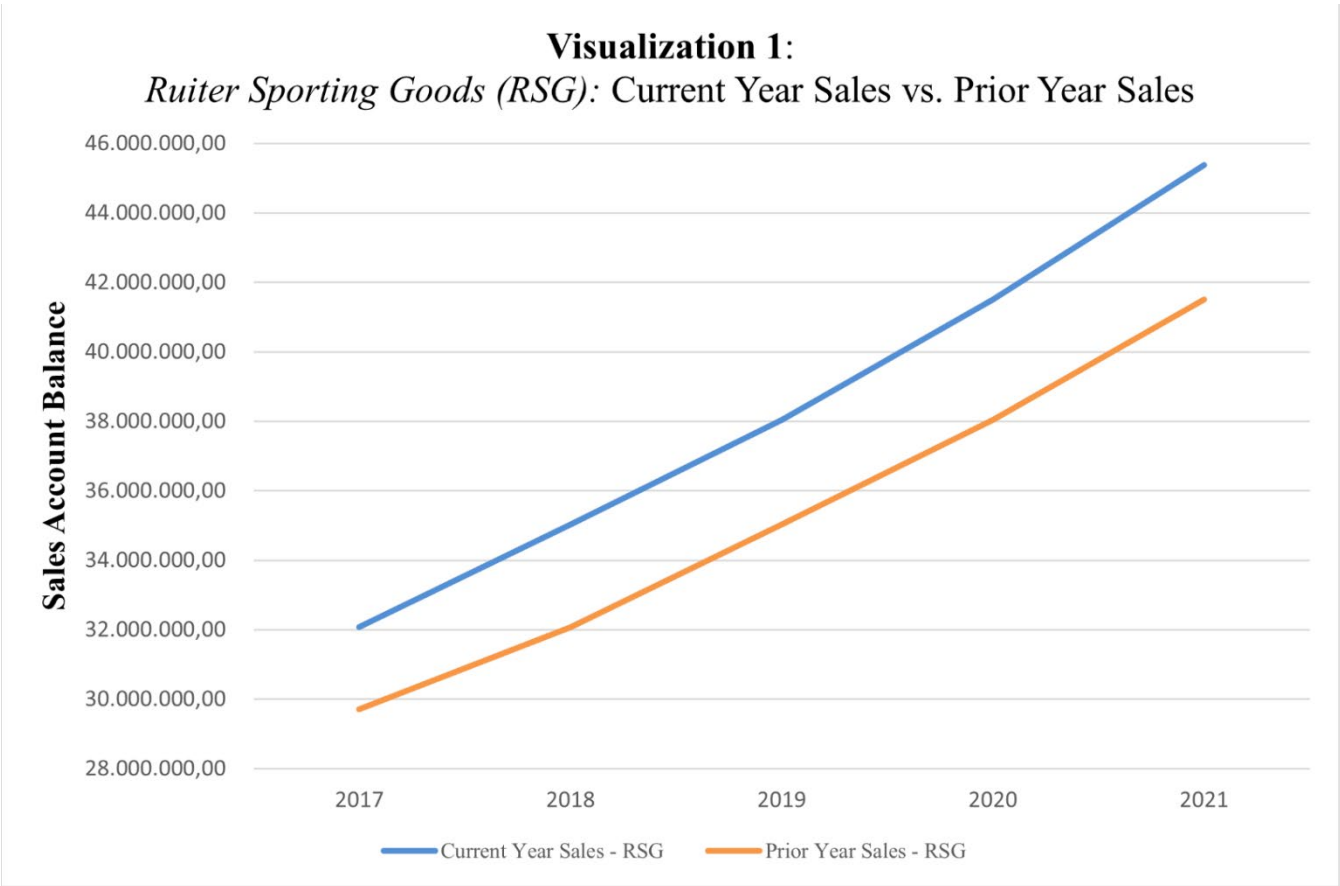
Please select the file that you want to upload:

No file chosen

----- Page Break -----

Next

Based on your development of your *Visualization 1*, your final version looks as follows.



Note: The final version may differ slightly from what you have set up. Please treat the visualization as though you created it yourself.

You have also set up your other four visualizations to be consistent with your *Visualization 1* as shown above. The five visualizations you developed will be shown on the next page when clicking the button “Visualizations”.

Next

----- Page Break -----

Note to Reviewers: Only participants in the *Inherit ADA* condition received the following information:

Your audit team recently introduced *data analytic visualizations* for the current year Ruiter audit. The costs (i.e., chargeable hours) of developing and using data analytics are charged to the cycle in which the data analytics are used.

Your audit manager asked *Sam, another in-charge/senior*, to develop data analytic visualizations for the current year Ruiter audit engagement. Therefore, Sam recently developed data analytic visualizations for Ruiter's *Sporting Goods Sales account*. Your manager granted you control and freedom over how you will use the visualizations developed by Sam. The visualizations developed by Sam will be shown on the next page when clicking the button "Visualizations".

Next

----- Page Break -----

Note to Reviewers: Only participants in the *Inform ADA without a Prime* condition received the following information:

Your audit team recently introduced ***data analytic visualizations*** for the current year Ruiter audit. The costs (i.e., chargeable hours) of developing and using data analytics are charged to the cycle in which the data analytics are used.

Your audit manager asked ***Sam, another in-charge/senior***, to develop data analytic visualizations for the current year Ruiter audit engagement. Therefore, Sam recently developed data analytic visualizations for Ruiter’s *Sporting Goods Sales account*. Your manager granted you control and freedom over how you will use the visualizations developed by Sam. The visualizations developed by Sam will be shown on the next page when clicking the button “Visualizations”.

The following is a memorandum describing the development of the data analytic visualizations performed by Sam.

Prepared by: SGR 15/1/2022

Audit Data Analytic Visualizations Development Memorandum

Subject: Ruiter’s *Sporting Goods Sales account*

Task: ***Develop data analytic visualizations***: determine the data sources, collect the data, verify data reliability, evaluate the calibration of the data in relation to predicting Ruiter Sporting Goods Sales, and set up the visualizations.

The following data were used to develop the visualizations to compare with Ruiter Sporting Goods Sales over the last five years:

- **Prior Years’ Sales**
- **Ruiter B.V. Consolidated Sales**
- **Industry Sales Growth**
- **Non-Financial Measures**
- **Budgeted Sales**

Costs: Spent **16 chargeable hours** determining the data sources, collecting the data, verifying data reliability, and evaluating the calibration of the data in relation to predicting Ruiter Sporting Goods Sales. Charged **4 hours** (in addition to the previous 16 hours) determining the most appropriate form (i.e., **line graphs**) to set up the visualizations based on firm training materials and watching firm tutorials.

Visualizations to be used in relation to the substantive analytical procedure for Ruiter’s *Sporting Goods Sales account* include:

Visualization 1, Ruiter Sporting Goods: Current Year Sales vs. Prior Year Sales

Visualization 2, Ruiter Sporting Goods Percentage of Consolidated Sales: Current Year vs. Prior Year

Visualization 3, Annual Sales Growth: Ruiter Sporting Goods vs. Sporting Goods Industry

Visualization 4, Ruiter Sporting Goods: Sales Growth vs. Average Change in Non-Financial Measures

Visualization 5, Ruiter Sporting Goods: Current Year Sales vs. Budgeted Sales

----- Page Break -----

Next

Note to Reviewers: Only participants in the *Inform ADA with a Prime* condition received the following information:

Your audit team recently introduced *data analytic visualizations* for the current year Ruiter audit. The costs (i.e., chargeable hours) of developing and using data analytics are charged to the cycle in which the data analytics are used.

Your audit manager asked *Sam, another in-charge/senior*, to develop data analytic visualizations for the current year Ruiter audit engagement. Therefore, Sam recently developed data analytic visualizations for Ruiter's *Sporting Goods Sales account*. Your manager granted you control and freedom over how you will use the visualizations developed by Sam. The visualizations developed by Sam will be shown on the next page when clicking the button "Visualizations".

The following is a memorandum describing the development of the data analytic visualizations performed by Sam.

While reading the memorandum, try to imagine how you yourself would feel *if you were experiencing* the uncertainty and stress of developing the data analytic visualizations performed by Sam and how this experience would affect your work. Try to imagine how you yourself would feel *if you were Sam*.

Audit Data Analytic Visualizations Development Memorandum

Subject: Ruiter's *Sporting Goods Sales account*

Task: **Develop data analytic visualizations:** determine the data sources, collect the data, verify data reliability, evaluate the calibration of the data in relation to predicting Ruiter Sporting Goods Sales, and set up the visualizations.

The following data were used to develop the visualizations to compare with Ruiter Sporting Goods Sales over the last five years:

- **Prior Years' Sales**
- **Ruiter B.V. Consolidated Sales**
- **Industry Sales Growth**
- **Non-Financial Measures**
- **Budgeted Sales**

Costs: Spent **16 chargeable hours** determining the data sources, collecting the data, verifying data reliability, and evaluating the calibration of the data in relation to predicting Ruiter Sporting Goods Sales. Charged **4 hours** (in addition to the previous 16 hours) determining the most appropriate form (i.e., **line graphs**) to set up the visualizations based on firm training materials and watching firm tutorials.

Visualizations to be used in relation to the substantive analytical procedure for Ruiter's *Sporting Goods Sales account* include:

Visualization 1, *Ruiter Sporting Goods: Current Year Sales vs. Prior Year Sales*

Visualization 2, *Ruiter Sporting Goods Percentage of Consolidated Sales: Current Year vs. Prior Year*

Visualization 3, *Annual Sales Growth: Ruiter Sporting Goods vs. Sporting Goods Industry*

Visualization 4, *Ruiter Sporting Goods: Sales Growth vs. Average Change in Non-Financial Measures*

Visualization 5, *Ruiter Sporting Goods: Current Year Sales vs. Budgeted Sales*

Next

----- Page Break -----

Ruiter B.V.
31/12/2021
Sporting Goods Sales Division: Substantive Analytical Procedure

Procedure: To perform your substantive analytical procedure to test Ruiter's *Sporting Goods Sales account*, please **develop an expectation** for the 31/12/2021 Ruiter's *Sporting Goods Sales account*. The 31/12/2021 *Sporting Goods Sales account* balance is **€45.372.585**.

For the purposes of evaluating the difference between actual Sporting Goods Sales and your expectation, your **threshold** for this procedure is: **€4.410.000**.

Below are buttons with links to various pieces of information that can be used when developing your expectation.

Note to Reviewers: Only participants in the *Develop ADA* condition received the following information:

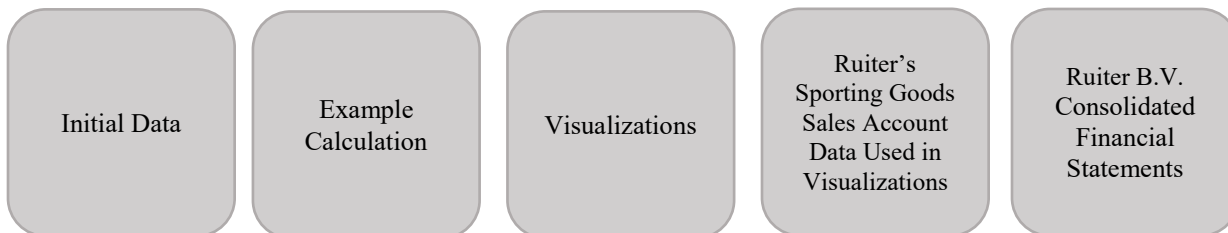
Among the information below is a Visualizations button, where you can find the final version of the five visualizations you have developed.

Recall that you recently charged 20 hours developing your data analytic visualizations for Ruiter's *Sporting Goods Sales account*. Also recall that the hours you spent developing and using your visualizations are charged to the cycle in which your visualizations are used. Specifically, the 20 hours that you used to develop your visualizations for the substantive analytical procedure related to Ruiter's *Sporting Goods Sales account* **were charged to your budget for Ruiter's sales and collection cycle**.

Similar to your experience with PP&E at interim, after charging the 20 hours related to developing your visualizations, your sales substantive analytical procedures are currently **about to go over budget**.

Ruiter's filing deadline is also approaching.

You can view any of the information below by clicking the buttons. You may use any of the information provided to develop your independent expectation for the 31/12/2021 Ruiter's *Sporting Goods Sales account* balance.



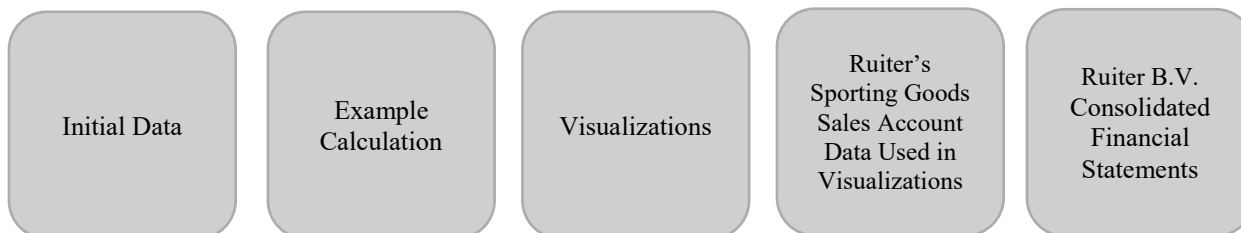
Note to Reviewers: Only participants in the *Inherit ADA* condition received the following information:

Among the information below is a Visualizations button, where you can find the visualizations developed by Sam.

Sam recently charged 20 hours developing data analytic visualizations for Ruiter's *Sporting Goods Sales account*. Recall that the hours spent developing and using data visualizations are charged to the cycle in which the data visualizations are used. Specifically, the 20 hours that Sam used to develop the visualizations for the substantive analytical procedure related to Ruiter's *Sporting Goods Sales account* **were charged to your budget for Ruiter's sales and collection cycle**.

Similar to your experience with PP&E at interim, after charging the 20 hours related to developing the visualizations, your sales substantive analytical procedures are currently **about to go over budget**. **Ruiter's filing deadline** is also approaching.

You can view any of the information below by clicking the buttons. You may use any of the information provided to develop your independent expectation for the 31/12/2021 Ruiter's *Sporting Goods Sales account* balance.



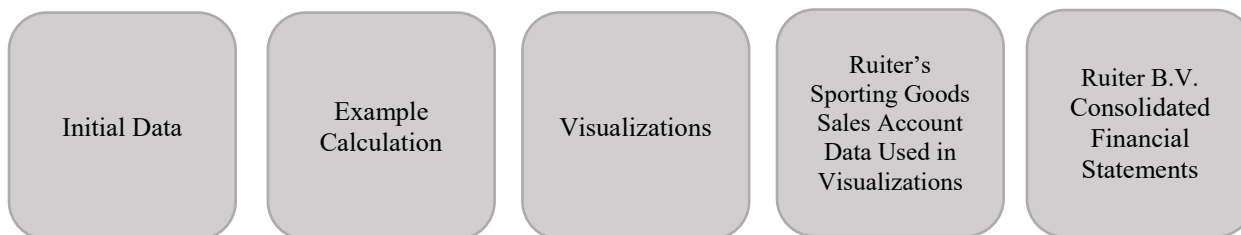
Note to Reviewers: Only participants in the *Inform ADA without a Prime* condition and the *Inform ADA with a Prime* condition received the following information:

Among the information below is a Visualizations button, where you can find the visualizations developed by Sam.

Recall that Sam recently charged 20 hours developing data analytic visualizations for Ruiter's *Sporting Goods Sales account*. Also recall that the hours spent developing and using data visualizations are charged to the cycle in which the data visualizations are used. Specifically, the 20 hours that Sam used to develop the visualizations for the substantive analytical procedure related to Ruiter's *Sporting Goods Sales account* **were charged to your budget for Ruiter's sales and collection cycle**.

Similar to your experience with PP&E at interim, after charging the 20 hours related to developing the visualizations, your sales substantive analytical procedures are currently **about to go over budget**. **Ruiter's filing deadline** is also approaching.

You can view any of the information below by clicking the buttons. You may use any of the information provided to develop your independent expectation for the 31/12/2021 Ruiter's *Sporting Goods Sales account* balance.



Note to Reviewers: Only participants in the *No ADA* condition received the following information:

Similar to your experience with PP&E at interim, your sales substantive analytical procedures are currently **about to go over budget**. **Ruiter's filing deadline** is also approaching.

You can view any of the information below by clicking the buttons. You may use any of the information provided to develop your independent expectation for the 31/12/2021 Ruiter's *Sporting Goods Sales account* balance.

Initial Data

Example
Calculation

Ruiter's
Sporting Goods
Sales Account
Data

Ruiter B.V.
Consolidated
Financial
Statements

Note to Reviewers: Refer to following pages for the information/data that the participant viewed when clicking on each button above.

Note to Reviewers: If the Initial Data button was clicked, participants saw:

Initial Data Collected for Ruiter's 2021 *Sporting Goods Sales Account*

31/12/2021 Ruiter Sporting Goods Sales: €45.372.585

31/12/2020 (Prior Year) Ruiter Sporting Goods Sales: €41.508.009

Percent Change in Ruiter Sporting Goods Sales 31/12/2020 to 31/12/2021: +9,3%

Inflation rate from 31/12/2020 to 31/12/2021: +3,9%

Inflation rate from 31/12/2019 to 31/12/2020: +2,7%

The following industry information is also available:

- Average Sales increase from 31/12/2020 to 31/12/2021 for the Sporting Goods Industry: 11,4%

Note to Reviewers: If the Example Calculation button was clicked, participants saw:

Example Calculation

Based on the initial data, one expected balance for Ruiter's *Sporting Goods Sales account* that you calculated was as follows:

Expected change in Ruiter Sporting Goods Sales =

31/12/2020 (Prior Year) Ruiter Sporting Goods Sales × Average Sales increase from 31/12/2020 to 31/12/2021 for the Sporting Goods Industry =

€41.508.009 × 11,4% = €4.731.913

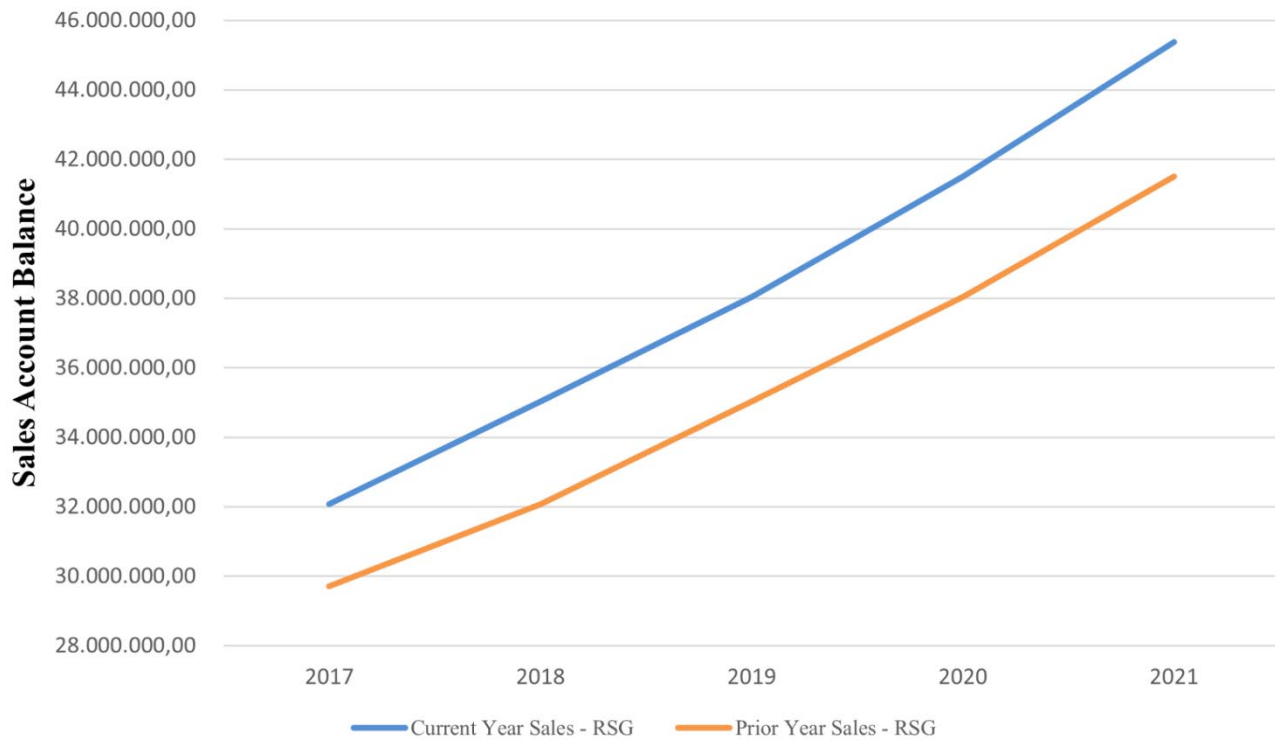
Expected balance for 31/12/2021 Ruiter Sporting Goods Sales =

€41.508.009 + €4.731.913 = €46.239.922

Note to Reviewers: If the Visualizations button was clicked, participants saw:

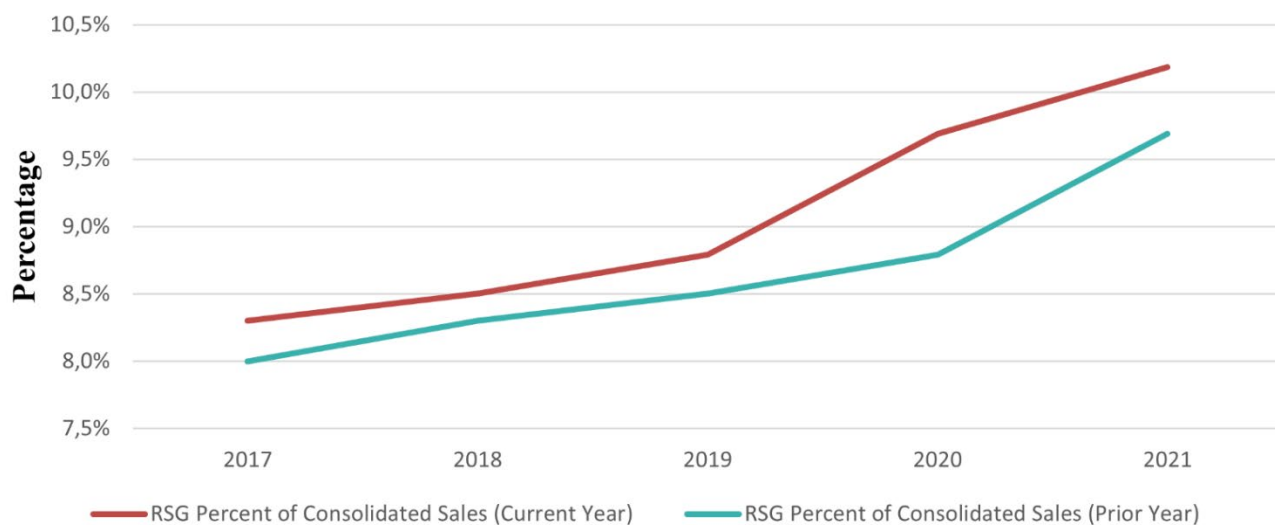
Visualization 1:

Ruiter Sporting Goods (RSG): Current Year Sales vs. Prior Year Sales

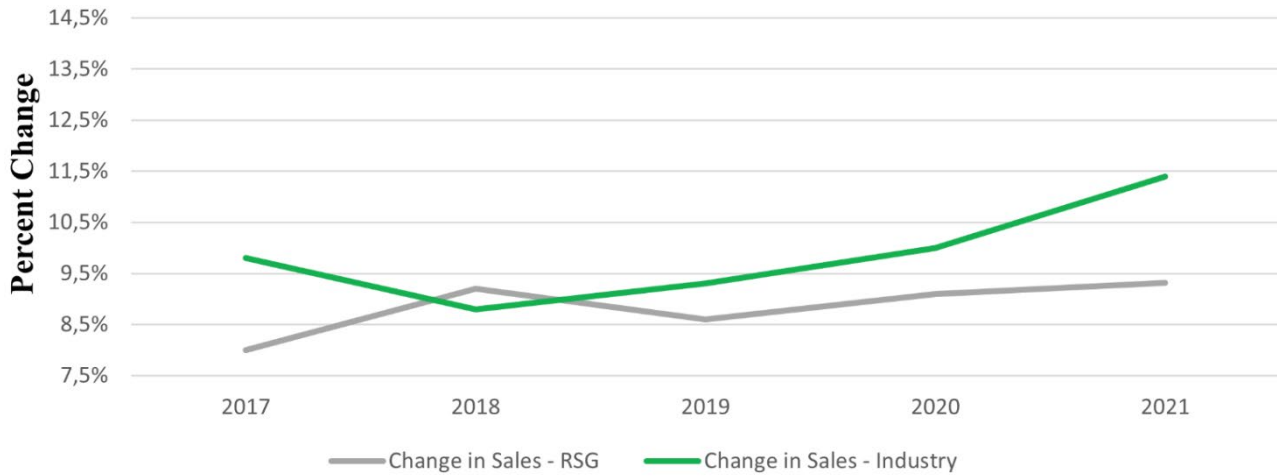


Visualization 2:

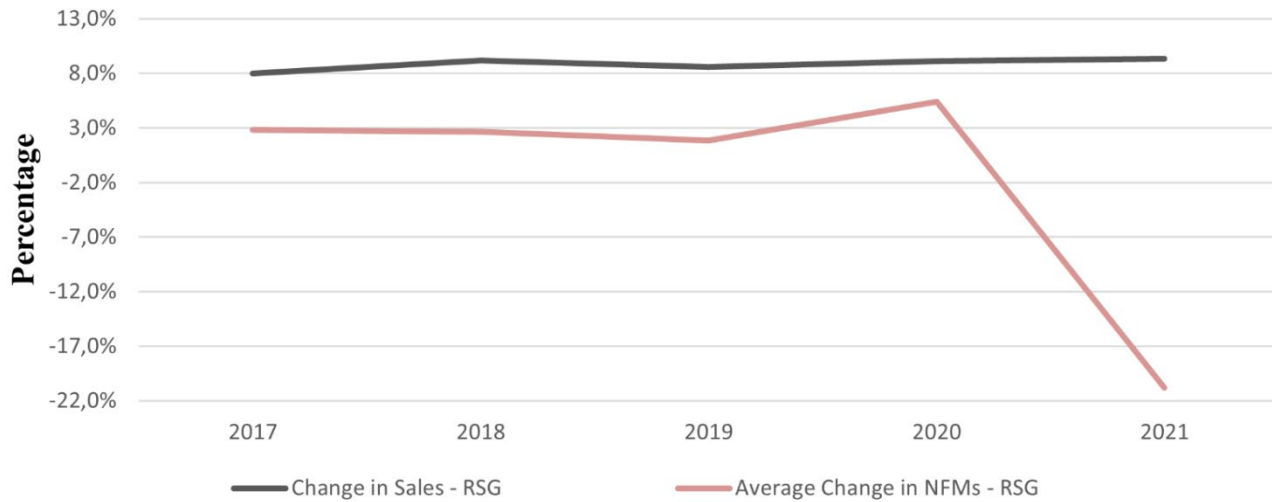
*Ruiter Sporting Goods (RSG) Percentage of Consolidated Sales:
Current Year vs. Prior Year*



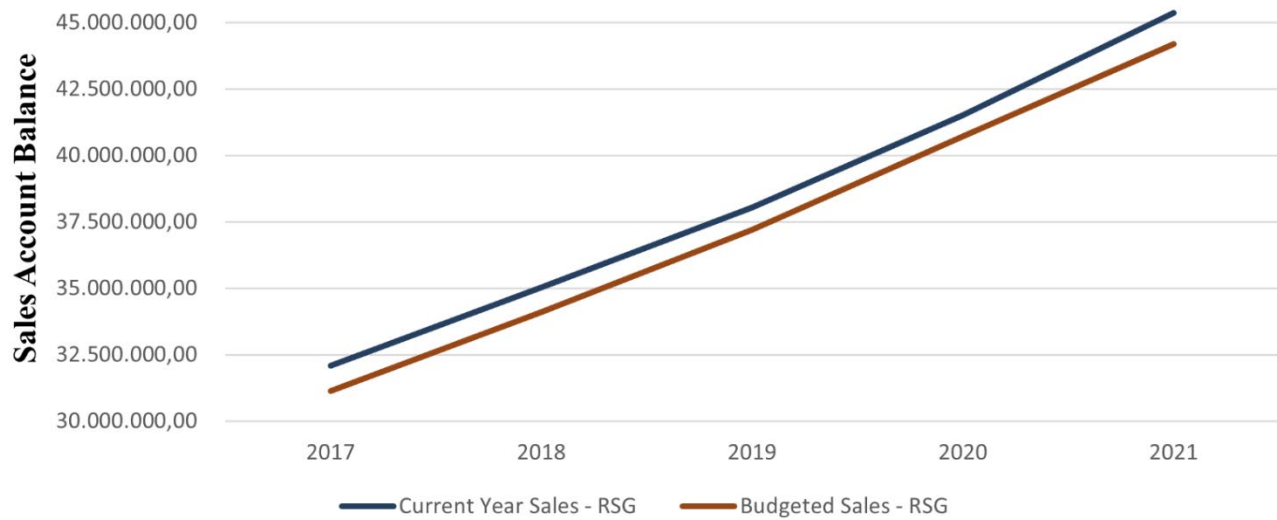
Visualization 3:
Annual Sales Growth: Ruitersporting Goods (RSG) vs. Sporting Goods Industry



Visualization 4:
Ruitersporting Goods (RSG): Sales Growth vs. Average Change in Non-Financial Measures (NFM)



Visualization 5:
Ruiter Sporting Goods (RSG): Current Year Sales vs. Budgeted Sales



Note to Reviewers: If Ruiters' Sporting Goods Sales Account Data (Used in Visualizations) button was clicked, participants saw:

Additional Note to Reviewers: The "Used in Visualizations" in (parentheses) in the title below was presented only to participants in the *Develop ADA* condition, the *Inherit ADA* condition, the *Inform ADA without a Prime* condition, and the *Inform ADA with a Prime* condition. Since participants in the *No ADA* condition did not receive any information about data visualizations, the title presented to them was **Ruiters' Sporting Goods Sales Account Data** without the text in (parentheses).

Ruiters' Sporting Goods Sales Account Data (Used in Visualizations)

31/12/2021 Ruiters Sporting Goods Sales: €45.372.585
31/12/2020 Ruiters Sporting Goods Sales: €41.508.009
31/12/2019 Ruiters Sporting Goods Sales: €38.045.838
31/12/2018 Ruiters Sporting Goods Sales: €35.032.999
31/12/2017 Ruiters Sporting Goods Sales: €32.081.502
31/12/2016 Ruiters Sporting Goods Sales: €29.705.094

31/12/2021 Ruiters B.V. Consolidated Sales: €445.537.042
31/12/2020 Ruiters B.V. Consolidated Sales: €428.401.576
31/12/2019 Ruiters B.V. Consolidated Sales: €432.728.847
31/12/2018 Ruiters B.V. Consolidated Sales: €412.152.938
31/12/2017 Ruiters B.V. Consolidated Sales: €386.524.116

Percent Change in Ruiters Sporting Goods Sales 31/12/2020 to 31/12/2021: +9,3%
Percent Change in Ruiters Sporting Goods Sales 31/12/2019 to 31/12/2020: +9,1%
Percent Change in Ruiters Sporting Goods Sales 31/12/2018 to 31/12/2019: +8,6%
Percent Change in Ruiters Sporting Goods Sales 31/12/2017 to 31/12/2018: +9,2%
Percent Change in Ruiters Sporting Goods Sales 31/12/2016 to 31/12/2017: +8,0%

Industry Information:

- Average Sales increase from 31/12/2020 to 31/12/2021 for the Sporting Goods Industry: 11,4%
- Average Sales increase from 31/12/2019 to 31/12/2020 for the Sporting Goods Industry: 10,0%
- Average Sales increase from 31/12/2018 to 31/12/2019 for the Sporting Goods Industry: 9,3%
- Average Sales increase from 31/12/2017 to 31/12/2018 for the Sporting Goods Industry: 8,8%
- Average Sales increase from 31/12/2016 to 31/12/2017 for the Sporting Goods Industry: 9,8%

Ruiters Sporting Goods Division compiles the following non-financial measures each year for the purposes of disclosure in the Ruiters Inc's 10-K filing:

- 2021 non-financial measures:

Ruiters Sporting Goods had 49 customer accounts as of 31/12/2021. Ruiters Sporting Goods had 17 sporting goods products as of 31/12/2021. Ruiters Sporting Goods had 5 patents related to sporting goods sales that provide exclusive rights to sell five of their main products as of 31/12/2021. Ruiters Sporting Goods had 124 employees as of 31/12/2021. Ruiters Sporting Goods had 117.000 square feet of production space within its facilities as of 31/12/2021.

- 2020 non-financial measures:

Ruiter Sporting Goods had 63 customer accounts as of 31/12/2020. Ruiter Sporting Goods had 22 sporting goods products as of 31/12/2020. Ruiter Sporting Goods had 6 patents related to Sporting Goods Sales that provide exclusive rights to sell six of their main products as of 31/12/2020. Ruiter Sporting Goods had 158 employees as of 31/12/2020. Ruiter Sporting Goods had 148.000 square feet of production space within its facilities as of 31/12/2020.

- 2019 non-financial measures:

Ruiter Sporting Goods had 58 customer accounts as of 31/12/2019. Ruiter Sporting Goods had 20 sporting goods products as of 31/12/2019. Ruiter Sporting Goods had 6 patents related to Sporting Goods Sales that provide exclusive rights to sell six of their main products as of 31/12/2019. Ruiter Sporting Goods had 154 employees as of 31/12/2019. Ruiter Sporting Goods had 140.000 square feet of production space within its facilities as of 31/12/2019.

- 2018 non-financial measures:

Ruiter Sporting Goods had 54 customer accounts as of 31/12/2018. Ruiter Sporting Goods had 21 sporting goods products as of 31/12/2018. Ruiter Sporting Goods had 6 patents related to Sporting Goods Sales that provide exclusive rights to sell six of their main products as of 31/12/2018. Ruiter Sporting Goods had 151 employees as of 31/12/2018. Ruiter Sporting Goods had 134.000 square feet of production space within its facilities as of 31/12/2018.

- 2017 non-financial measures:

Ruiter Sporting Goods had 52 customer accounts as of 31/12/2017. Ruiter Sporting Goods had 20 sporting goods products as of 31/12/2017. Ruiter Sporting Goods had 6 patents related to Sporting Goods Sales that provide exclusive rights to sell six of their main products as of 31/12/2017. Ruiter Sporting Goods had 149 employees as of 31/12/2017. Ruiter Sporting Goods had 130.000 square feet of production space within its facilities as of 31/12/2017.

- 2016 non-financial measures:

Ruiter Sporting Goods had 51 customer accounts as of 31/12/2016. Ruiter Sporting Goods had 19 sporting goods products as of 31/12/2016. Ruiter Sporting Goods had 6 patents related to Sporting Goods Sales that provide exclusive rights to sell six of their main products as of 31/12/2016. Ruiter Sporting Goods had 145 employees as of 31/12/2016. Ruiter Sporting Goods had 125.000 square feet of production space within its facilities as of 31/12/2016.

Ruiter's forecast/budget for 31/12/2021 Sporting Goods Sales = €44.184.421

Ruiter's forecast/budget for 31/12/2020 Sporting Goods Sales = €40.722.969

Ruiter's forecast/budget for 31/12/2019 Sporting Goods Sales = €37.189.926

Ruiter's forecast/budget for 31/12/2018 Sporting Goods Sales = €34.087.925

Ruiter's forecast/budget for 31/12/2017 Sporting Goods Sales = €31.130.525

Note to Reviewers: If the Ruiter B.V. Consolidated Financial Statements button was clicked, participants saw:

Ruiter B.V. Consolidated Income Statements

| | 31/12/2021 (Unaudited) | 31/12/2020 (Audited) | 31/12/2019 (Audited) |
|---|-----------------------------------|---------------------------------|---------------------------------|
| Sales | €445.537.042 | €428.401.576 | €432.728.847 |
| Cost of sales | 262.056.050 | 252.316.730 | 251.743.510 |
| Gross profit | 183.480.992 | 176.084.846 | 180.985.337 |
| Selling, general, and administration expenses | 166.183.850 | 161.007.121 | 161.078.940 |
| Income from operations | 17.297.142 | 15.077.725 | 19.906.397 |
| Other income (expense): | | | |
| Interest expense | (800.850) | (782.442) | (817.950) |
| Interest income | 158.550 | 147.680 | 129.980 |
| Other | 651.000 | 609.440 | 551.740 |
| Total other income (expense), net | 8.700 | (25.321) | (136.230) |
| Income before income taxes | 17.305.842 | 15.052.403 | 19.770.167 |
| Income tax provision | 4.326.460 | 8.049.065 | 8.193.240 |
| Net income | €12.979.382 | €7.003.338 | €11.576.927 |

Ruiter B.V. Consolidated Balance Sheets

| | 31/12/2021 (Unaudited) | 31/12/2020 (Audited) | 31/12/2019 (Audited) |
|--|---------------------------|-------------------------|-------------------------|
| Assets | | | |
| Current assets: | | | |
| Cash and cash equivalents | €2.703.493 | €2.399.119 | €2.475.259 |
| Accounts receivable, net of allowances for doubtful accounts of 305.465; 294.947; and 280.296 respectively | 2.175.134 | 2.157.193 | 1.914.657 |
| Inventory | 85.152.302 | 76.507.808 | 69.885.808 |
| Prepaid advertising | 3.413.226 | 3.419.183 | 3.420.740 |
| Other prepaid expenses | 1.746.769 | 1.680.868 | 1.649.511 |
| Deferred income tax benefits | 3.974.479 | 3.825.406 | 3.789.002 |
| Total current assets | 99.165.403 | 89.989.577 | 83.134.977 |
| Property, plant, and equipment, at cost: | | | |
| Land and buildings | 32.935.183 | 31.027.958 | 31.987.800 |
| Fixtures and equipment | 35.761.313 | 32.682.743 | 31.157.190 |
| Leasehold improvements | 925.109 | 855.430 | 781.869 |
| Total property, plant, and equipment | 69.621.605 | 64.566.131 | 63.926.859 |
| Less - accumulated depreciation | 24.336.208 | 22.036.582 | 20.987.770 |
| Property, plant, and equipment, net | 45.285.397 | 42.529.549 | 42.939.089 |
| Intangibles, net | 1.180.452 | 1.113.258 | 1.028.568 |
| Total assets | 145.631.252 | 133.632.384 | 127.102.634 |
| Liabilities and shareholders' equity | | | |
| Current liabilities | | | |
| Accounts payable | 29.158.745 | 26.199.455 | 23.951.337 |
| Accrued liabilities | 15.467.162 | 13.420.462 | 13.532.945 |
| Short-term note payable | 4.239.082 | 3.696.164 | 3.453.472 |
| Income taxes payable | 5.257.407 | 4.458.369 | 4.029.030 |
| Total current liabilities | 54.122.396 | 47.774.450 | 44.966.784 |
| Deferred income taxes | 2.561.254 | 2.541.909 | 2.267.811 |
| Long-term liabilities | 182.782 | 180.863 | 168.041 |
| Shareholders' equity: | | | |
| Common Stock, 17.773.000 shares issued | 168.763 | 175.531 | 184.739 |
| Additional paid-in capital | 15.146.120 | 15.449.145 | 15.752.208 |
| Retained earnings | 110.916.838 | 103.542.429 | 96.542.091 |
| Treasury stock (at cost) | (37.466.901) | (36.031.943) | (32.779.040) |
| Total shareholders' equity | 88.764.820 | 83.135.162 | 79.699.998 |
| Total liabilities and shareholders' equity | €145.631.252 | €133.632.384 | €127.102.634 |

Note to Reviewers: All participants then saw:

It is now time to document your Expectation for Ruiter's 2021 *Sporting Goods Sales Account* Balance.

Please *develop your expectation as you would in practice given the information provided*. In order for your Stage 1 work to be complete, you must:

- (1) Formally develop an expectation for the account.
- (2) Input your expectation in the space provided below.
- (3) Document how you developed your expectation. Use the space provided below.

Please input your expectation for the account in the space below.

Note: Please do **NOT** use any symbols, such as PERIOD (.) or COMMA (,). Please input **only numbers** (e.g., 123456).

Please **round** to the nearest euro:

€

Please describe below **exactly how** you developed your expectation:

**** Once you proceed, you will not be able to go back to the information on this page. ****

Next

----- Page Break -----

As noted above, for the purposes of evaluating the difference between actual Sporting Goods Sales and your expectation, your **threshold** for this procedure is: **€4.410.000**. In other words, if the difference between the 31/12/2021 sales balance and your expectation exceeds €4.410.000, you need to investigate the difference. If the difference between the 31/12/2021 sales balance and your expectation is equal to or less than €4.410.000, you have the freedom to decide whether to perform any additional procedures related to this substantive analytical procedure task. The threshold was calculated according to your firm's audit manual, given the materiality calculation in the planning workpapers and the number of sales product lines.

Based on the expectation you provided, your audit documentation would contain the following so far:

| 31/12/2021 Sporting Good Sales | | Expectation of 31/12/2021 Sporting Goods Sales | | Difference between 31/12/2021 Sales and Expectation | | Threshold |
|--------------------------------|---|--|---|---|---|------------|
| €45.372.585 | a | € <div>Expectation Provided by Participant</div> | b | € <div>Difference automatically calculated</div> | c | €4.410.000 |

The difference between the 31/12/2021 Sales balance and your Expectation is

Difference automatically calculated

Note to Reviewers: The expectation amount that the participant calculated and input for the first question on the prior page was carried forward to the table above for 'Expectation Provided by Participant'. The difference between 31/12/2021 Sales (i.e., 45.372.585) and 'Expectation Provided by Participant' was automatically calculated by the software and presented in the table as well as in the sentence above.

To complete **Tickmark c**, please provide your conclusion (Choose one of the below options).

- ☐ (1) The balance appears reasonable. No additional work would be required related to this analytical procedure.
- ☐ (2) Additional work would be required related to this analytical procedure before concluding the balance appears reasonable.

Next

----- Page Break -----

Note to Reviewers: The question below was presented only to participants who selected option (2) as their conclusion for the question on the prior page. Participants who selected option (1) directly proceeded to the next question (i.e., the question about “*communicate to your audit manager*”).

You chose (2) that additional work would be required before concluding the balance appear reasonable. What *additional work* would you perform and/or *questions* would you ask of Ruiter management?

Please list any *unusual or unexpected relationships* involving the sales account that you would *communicate to your audit manager*. If there is nothing that you would convey to your audit manager, choose “Nothing” below:

☐ Nothing

Next

----- Page Break -----

STAGE 2: QUESTIONS RELATED TO YOUR JUDGMENTS

Instructions: For the following questions, if you cannot provide an exact response, please provide as accurate of an approximation as possible.

Note to Reviewers: The question below was presented to all participants.

During the course of performing your substantive analytical procedure for the 31/12/2021 Ruiter's *Sporting Goods Sales* account, did you notice **any unexpected relationships or inconsistencies** between **the sales** account and **the additional data provided**? Please **list any** unexpected relationships or inconsistencies that you noticed in the space below. If you did not notice any unexpected relationships or inconsistencies, choose "Nothing" below:

☐ Nothing

Note to Reviewers: The question below was only presented to participants who filled in the space for the previous question.

To what extent were you confident that those unexpected relationships or inconsistencies should be investigated?

| Very low confidence | | | | | | | | | | | Very high confidence |
|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Note to Reviewers: The question below was presented to all participants.

Given the limited information you were provided, what is your assessment of the **likelihood** that the 31/12/2021 Ruiter's *Sporting Goods Sales* account is **materially misstated**?

| Very low | | | | | | | | | | | Very high |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

----- Page Break -----

Next

STAGE 3: QUESTIONS REALTED TO YOUR TASK

Note to Reviewers: The question below was presented to all participants.

Were data analytic visualizations (**5 graphs** comparing Ruiter's *Sporting Goods Sales account* to 5 years of prior year data, industry data, non-financial measures, etc.) available in the information provided to you for developing your expectation?

- ☐ Yes
- ☐ No

Note to Reviewers: The question below was presented only to participants in the **Develop ADA** condition and the **Inherit ADA** condition who chose "Yes" for the previous question.

Who **developed** the data analytic visualizations related to Ruiter's *Sporting Goods Sales account*?

- ☐ Me, an in-charge/senior
- ☐ Sam, another in-charge/senior

Note to Reviewers: The question below was presented only to participants in the **Inform ADA without a Prime** condition and the **Inform ADA with a Prime** condition who chose "Yes" for the first question on this page.

Who **developed** the data analytic visualizations related to Ruiter's *Sporting Goods Sales account*?

- ☐ Me, an in-charge/senior
- ☐ Sam, another in-charge/senior, who also ALSO provided an Audit Data Analytic Visualizations Development Memorandum
- ☐ Sam, another in-charge/senior, who did NOT provide an Audit Data Analytic Visualizations Development Memorandum

Note to Reviewers: The question below was presented only to participants in the **Inherit ADA** condition, the **Inform ADA without a Prime** condition, and the **Inform ADA with a Prime** condition who chose "Yes" for the first question on this page.

Were you told to imagine how you yourself would feel **if you were Sam** and **experiencing** the uncertainty and stress of developing the data analytic visualizations?

- ☐ Yes
- ☐ No

Next

----- Page Break -----

Note to Reviewers: The following eight questions were presented only to participants in the *Develop ADA* condition, the *Inherit ADA* condition, the *Inform ADA without a Prime* condition, and the *Inform ADA with a Prime* condition.

To what extent did you feel **control** over the data analytic visualizations related to Ruiter's *Sporting Goods Sales account*?

| | | | | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Very little | | | | | | | | | | | Very much |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

To what extent did you feel **associated** with (i.e., have intimate **knowledge** about) the data analytic visualizations related to Ruiter's *Sporting Goods Sales account*?

| | | | | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Very little | | | | | | | | | | | Very much |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

To what extent did you feel **invested** in (i.e., energy, time, effort, and attention) the data analytic visualizations related to Ruiter's *Sporting Goods Sales account*?

| | | | | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Very little | | | | | | | | | | | Very much |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

To what extent did you feel that the data analytic visualizations related to Ruiter's *Sporting Goods Sales account* were **YOURS** (or at least in some part YOURS)?

| | | | | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Very little | | | | | | | | | | | Very much |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

To what extent did you feel that you "**owned**" the data analytic visualizations related to Ruiter's *Sporting Goods Sales account* (or at least some part thereof)?

| | | | | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Very little | | | | | | | | | | | Very much |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

To what extent did you feel **responsible** for the data analytic visualizations related to Ruiter's *Sporting Goods Sales* account?

| | | | | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Very little | | | | | | | | | | | Very much |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

To what extent did you **believe in** data analytic visualizations related to Ruiter's *Sporting Goods Sales* account?

| | | | | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Very little | | | | | | | | | | | Very much |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

How **confident** were you in the reliability of the data analytic visualizations related to Ruiter's *Sporting Goods Sales* account?

| | | | | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Not at all confident | | | | | | | | | | | Extremely confident |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Note to Reviewers: The question below was presented to all participants.

Please describe the level of **mental effort** you expended (i.e., the extent to which you used your intellect) in examining the 31/12/2021 Ruiter Sporting Goods *Sales* and *the additional data provided*.

| | | | | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| No effort | | | | | | | | | | | Extremely high effort |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Note to Reviewers: The following three questions were presented only to participants in the *Inherit ADA* condition, the *Inform ADA without a Prime* condition, and the *Inform ADA with a Prime* condition.

To what extent did you **picture** the development of the data analytic visualizations in your mind?

| | | | | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Very little | | | | | | | | | | | Very much |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

To what extent did you feel ***connected*** to Sam and Sam’s experience with developing the data analytic visualizations?

| | | | | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Very little | | | | | | | | | | | Very much |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

To what extent did you ***appreciate*** the effort that Sam expended to develop the data analytic visualizations related to Ruiter’s *Sporting Goods Sales* account?

| | | | | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Very little | | | | | | | | | | | Very much |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

Next

----- Page Break -----

Note to Reviewers: Only participants who did not view the visualizations (i.e., who did not click the “Visualizations” button) received the question below. This question was not presented to any participants in the *No ADA* condition.

When performing your substantive analytical procedure for the 31/12/2021 Ruiters’ *Sporting Goods Sales account*, it appears you did **not** view the **visualizations**. Please explain why you chose not to view this source of information.

Note to Reviewers: The question below was presented to all participants.

How strongly did you feel that additional testing is warranted as a result of **any unexpected relationships or inconsistencies** identified when auditing the 31/12/2021 Ruiters’ *Sporting Goods Sales account*?

| | | | | | | | | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------|
| Not at all | | | | | | | | | | | Extremely |
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | |

Next

Note to Reviewers: The questions below were presented to all participants.

STAGE 4: QUESTIONS RELATED TO YOUR AUDIT PRACTICE EXPERIENCES

Instructions: Please input responses as requested. If you cannot provide an exact response, please provide as accurate of an approximation as possible.

The following questions relate to **YOUR work experiences** and **NOT the audit of Ruiter**:

Please describe your level of experience with using data visualizations:

| None | | | | | | | | | | | Extensive |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

For the following question, please input an **actual number**.

If you don't know or cannot recall the exact answer, please make an estimation.

Number of times you have performed a substantive analytical procedure related to sales:

Percentage of your total chargeable audit hours on clients in the manufacturing industry over the past three years:

| | |
|----------------------|------|
| 0% | 100% |
| <input type="text"/> | |

In practice, when performing *substantive analytical procedures*, what percent of the time do you **use** NON-FINANCIAL MEASURES (e.g., number of employees, square footage of facilities, number of products) when developing your expectations for current year balances (does not have to be the primary basis for your expectation)?

| | |
|----------------------|------|
| 0% | 100% |
| <input type="text"/> | |

In practice, when performing *substantive analytical procedures*, what percent of the time do you **use visualizations** when developing your expectations for current year balances (does not have to be the primary basis for your expectation)?

| | |
|----------------------|------|
| 0% | 100% |
| <input type="text"/> | |

In practice, when *using data analytics*, what percent of the time do you use data analytics **developed by others** (e.g., data specialists, a centralized data analytics team, or other audit team members)?

0%100%

In your own past experiences, what percent of the time have the costs (i.e., chargeable hours) of developing data analytics been *charged to the cycle* in which the data analytics were used?

0%100%

Next

----- Page Break -----

Demographic Questions

Are you an RA (Register Accountant) or equivalent (e.g., CPA)?

- ☐ Yes
- ☐ No
- ☐ Equivalent certification (e.g., CPA), please describe _____

Your audit experience (e.g., 5 years and 3 months):

Your primary industry of expertise:

- ☐ Financial Institutions - Financiele Ondernemingen
- ☐ Construction & Project Development - Bouw- en Projectontwikkeling
- ☐ Real Estate - Vastgoed
- ☐ Housing Associations - Woningcorporaties
- ☐ Energy Sector - Energie
- ☐ IT/Telecom/High Tech
- ☐ Municipalities/Provinces - Gemeenten/Provincies
- ☐ Automotive
- ☐ Hotel & Restaurant Business - Horeca
- ☐ Retail - (Overige) Handel
- ☐ Manufacturing - (Overige) Productie
- ☐ Service - (Overige) Dienstverlening
- ☐ Oil & Offshore - Olie en Offshore
- ☐ Non-Governmental Organizations (NGO's) - Non-Gouvernementele Organisaties (NGO's)
- ☐ Shipping - Scheepvaart
- ☐ Other - Overig (please explain) _____

Next

----- Page Break -----

Finally, please respond to a number of statements about yourself, which are not related to the case or your audit practice experiences. Please indicate how well the following statements describe you.

| | Does NOT describe me well | | | | Describes me very well |
|--|------------------------------------|-----------------------|-----------------------|-----------------------|------------------------------|
| | 0 | 1 | 2 | 3 | 4 |
| I daydream and fantasize, with some regularity, about things that might happen to me. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I often have tender, concerned feelings for people less fortunate than me. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I sometimes find it difficult to see things from the “other guy’s” point of view. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sometimes I don’t feel very sorry for other people when they are having problems. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I really get involved with the feelings of the characters in a novel. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am usually objective when I watch a movie or play, and I don’t often get completely caught up in it. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I try to look at everybody’s side of a disagreement before I make a decision. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When I see someone being taken advantage of, I feel kind of protective towards them. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I sometimes try to understand my friends better by imagining how things look from their perspective. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Becoming extremely involved in a good book or movie is somewhat rare for me. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Other people’s misfortunes do not usually disturb me a great deal. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| If I’m sure I’m right about something, I don’t waste much time listening to other people’s arguments. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| After seeing a play or movie, I have felt as though I were one of the characters. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When I see someone being treated unfairly, I sometimes don’t feel very much pity for them. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am often quite touched by things that I see happen. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I believe that there are two sides to every question and try to look at them both. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I would describe myself as a pretty soft-hearted person. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When I watch a good movie, I can very easily put myself in the place of a leading character. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When I’m upset at someone, I usually try to “put myself in his shoes” for a while. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me.

☐ ☐ ☐ ☐ ☐

Before criticizing somebody, I try to imagine how I would feel if I were in their place.

☐ ☐ ☐ ☐ ☐

Next

----- Page Break -----

YOU HAVE NOW COMPLETED THE STUDY!

Thank you for your participation in our study!
We sincerely appreciate your time and effort.