

## Using Macro to simplify to Calculate Multi-Rater Observation Agreement

Abbas S. Tavakoli, DrPH, MPH, ME, Richard Walker, PhD Candidate

### ABSTRACT

This paper describes using several macros program to calculate multi-rater observation agreement using the SAS ® Kappa statistic. In the paper, we show an example of four raters observed a video to select certain tasks. Each rater could select up to ten tasks. Each rater could select different tasks numbers. Inter-rater reliability (IRR) between the four raters is examined using the Kappa statistic, calculated using the SAS ® PROC FREQ, MEANS, and PRINT procedures. The Kappa statistic and 95% CI for observers were calculated and the overall IRR was calculated by averaging pairwise Kappa agreements. This paper provides an example of how using macro to calculate percentage agreement with the Kappa statistic with a 95% CI using SAS ® PROC FREQ, MEANS, and PRINT for multiple raters with multiple observation categories. The program can be used for more raters and tasks. This paper expands the current functionality of the SAS ® PROC FREQ procedure to support application of the Kappa statistic for more than two raters and several categories.

### Keywords:

Multi-rater Observation Agreement, Kappa Statistic, SAS

### INTRODUCTION

Inter-rater reliability (IRR) among rater can be measured in any situation in which two or more raters are assessing the same thing. It was first time to introduce kappa statistics by Cohen (1960). The Kappa statistic estimates the percentage of agreement among raters after removing the percentage of agreement which would occur by chance. In observational studies it is often necessary to assess multi-rater agreement for multiple observation categories. The Kappa statistic is commonly used to measure agreement among raters for categorical data (Altman, 1991). The SAS ® PROC FREQ procedure supports application of the Kappa statistic for two raters and several categories. However, calculation is not straightforward for more than two raters as data must first be manipulated in a square form table in order to use the SAS ® PROC FREQ procedure.

### PURPOSE

The purpose of this paper is to describe using macro program in SAS to calculate multi-rater observation agreement with the Kappa statistic.

### BACKGROUND

In this paper, we show an example of four raters observed a video to select certain tasks. Each rater could select up to ten tasks for simplification. Each rater could select different tasks numbers. An example could be: four raters watch video of children with Autism to select specific behavioral characteristics (tasks) which is determined by researcher. Each observer can select different number of tasks.

### DATA ANALYSIS

Analysis of this data was performed using SAS/STAT ® statistical software, version 9.2 (SAS, 2008). The SAS ® PROC FREQ procedure with the AGREE option was used for Kappa statistical calculations. The maximum number of tasks that could be selected by each rater was 10 for simplification. However, this can be extended to select more tasks. Some variability existed in the number and order of tasks recorded by each rater. Table 1 is part of the original data for the first three videos and shows the tasks that were selected by each rater. Table1 showed each rater selected different number of tasks. Also, there are missing for electing tasks.

The Macro requires that the dataset given has the columns ID, TASK1, and task1 to the number of raters the user wishes to compare. The variable **numofRaters** determines how many raters the user wishes to compare, starting with 1 and going upwards. The dataset is loaded into SAS and formatted for easy use. In order to calculate Kappa in SAS the frequency table must be square. Uebersax (2002) used pseudo-observation to create square table. A weight of 1 for real observations and a weight of .0000000001 for pseudo-observations was assigned. Pseudo-

# Sample Observation Paper

**AW Rasmussen**

A red circular graphic with a gradient, appearing as a stylized arrow or a partial circle, located to the right of the author's name.

## **Sample Observation Paper:**

Ignite the flame of optimism with Get Inspired by is motivational masterpiece, Fuel Your Spirit with **Sample Observation Paper** . In a downloadable PDF format ( PDF Size: \*), this ebook is a beacon of encouragement. Download now and let the words propel you towards a brighter, more motivated tomorrow.

[https://crm.avenza.com/results/book-search/index.jsp/origine\\_du\\_nom\\_de\\_famille\\_stahl\\_oeuvres\\_courtes.pdf](https://crm.avenza.com/results/book-search/index.jsp/origine_du_nom_de_famille_stahl_oeuvres_courtes.pdf)

## **Table of Contents Sample Observation Paper**

1. Understanding the eBook Sample Observation Paper
  - The Rise of Digital Reading Sample Observation Paper
  - Advantages of eBooks Over Traditional Books
2. Identifying Sample Observation Paper
  - Exploring Different Genres
  - Considering Fiction vs. Non-Fiction
  - Determining Your Reading Goals
3. Choosing the Right eBook Platform
  - Popular eBook Platforms
  - Features to Look for in an Sample Observation Paper
  - User-Friendly Interface
4. Exploring eBook Recommendations from Sample Observation Paper
  - Personalized Recommendations
  - Sample Observation Paper User Reviews and Ratings
  - Sample Observation Paper and Bestseller Lists
5. Accessing Sample Observation Paper Free and Paid eBooks
  - Sample Observation Paper Public Domain eBooks
  - Sample Observation Paper eBook Subscription Services
  - Sample Observation Paper Budget-Friendly Options
6. Navigating Sample Observation Paper eBook Formats

- ePub, PDF, MOBI, and More
- Sample Observation Paper Compatibility with Devices
- Sample Observation Paper Enhanced eBook Features
- 7. Enhancing Your Reading Experience
  - Adjustable Fonts and Text Sizes of Sample Observation Paper
  - Highlighting and Note-Taking Sample Observation Paper
  - Interactive Elements Sample Observation Paper
- 8. Staying Engaged with Sample Observation Paper
  - Joining Online Reading Communities
  - Participating in Virtual Book Clubs
  - Following Authors and Publishers Sample Observation Paper
- 9. Balancing eBooks and Physical Books Sample Observation Paper
  - Benefits of a Digital Library
  - Creating a Diverse Reading Collection Sample Observation Paper
- 10. Overcoming Reading Challenges
  - Dealing with Digital Eye Strain
  - Minimizing Distractions
  - Managing Screen Time
- 11. Cultivating a Reading Routine Sample Observation Paper
  - Setting Reading Goals Sample Observation Paper
  - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Sample Observation Paper
  - Fact-Checking eBook Content of Sample Observation Paper
  - Distinguishing Credible Sources
- 13. Promoting Lifelong Learning
  - Utilizing eBooks for Skill Development
  - Exploring Educational eBooks
- 14. Embracing eBook Trends
  - Integration of Multimedia Elements
  - Interactive and Gamified eBooks

## Sample Observation Paper Introduction

In this digital age, the convenience of accessing information at our fingertips has become a necessity. Whether its research papers, eBooks, or user manuals, PDF files have become the preferred format for sharing and reading documents. However, the cost associated with purchasing PDF files can sometimes be a barrier for many individuals and organizations. Thankfully, there are numerous websites and platforms that allow users to download free PDF files legally. In this article, we will explore some of the best platforms to download free PDFs. One of the most popular platforms to download free PDF files is Project Gutenberg. This online library offers over 60,000 free eBooks that are in the public domain. From classic literature to historical documents, Project Gutenberg provides a wide range of PDF files that can be downloaded and enjoyed on various devices. The website is user-friendly and allows users to search for specific titles or browse through different categories. Another reliable platform for downloading Sample Observation Paper free PDF files is Open Library. With its vast collection of over 1 million eBooks, Open Library has something for every reader. The website offers a seamless experience by providing options to borrow or download PDF files. Users simply need to create a free account to access this treasure trove of knowledge. Open Library also allows users to contribute by uploading and sharing their own PDF files, making it a collaborative platform for book enthusiasts. For those interested in academic resources, there are websites dedicated to providing free PDFs of research papers and scientific articles. One such website is Academia.edu, which allows researchers and scholars to share their work with a global audience. Users can download PDF files of research papers, theses, and dissertations covering a wide range of subjects. Academia.edu also provides a platform for discussions and networking within the academic community. When it comes to downloading Sample Observation Paper free PDF files of magazines, brochures, and catalogs, Issuu is a popular choice. This digital publishing platform hosts a vast collection of publications from around the world. Users can search for specific titles or explore various categories and genres. Issuu offers a seamless reading experience with its user-friendly interface and allows users to download PDF files for offline reading. Apart from dedicated platforms, search engines also play a crucial role in finding free PDF files. Google, for instance, has an advanced search feature that allows users to filter results by file type. By specifying the file type as "PDF," users can find websites that offer free PDF downloads on a specific topic. While downloading Sample Observation Paper free PDF files is convenient, its important to note that copyright laws must be respected. Always ensure that the PDF files you download are legally available for free. Many authors and publishers voluntarily provide free PDF versions of their work, but its essential to be cautious and verify the authenticity of the source before downloading Sample Observation Paper. In conclusion, the internet offers numerous platforms and websites that allow users to download free PDF files legally. Whether its classic literature, research papers, or magazines, there is something for everyone. The platforms mentioned in this article, such as Project Gutenberg, Open Library, Academia.edu, and Issuu, provide access to a vast collection of PDF files. However, users should always be

cautious and verify the legality of the source before downloading Sample Observation Paper any PDF files. With these platforms, the world of PDF downloads is just a click away.

### FAQs About Sample Observation Paper Books

How do I know which eBook platform is the best for me? Finding the best eBook platform depends on your reading preferences and device compatibility. Research different platforms, read user reviews, and explore their features before making a choice. Are free eBooks of good quality? Yes, many reputable platforms offer high-quality free eBooks, including classics and public domain works. However, make sure to verify the source to ensure the eBook credibility. Can I read eBooks without an eReader? Absolutely! Most eBook platforms offer web-based readers or mobile apps that allow you to read eBooks on your computer, tablet, or smartphone. How do I avoid digital eye strain while reading eBooks? To prevent digital eye strain, take regular breaks, adjust the font size and background color, and ensure proper lighting while reading eBooks. What the advantage of interactive eBooks? Interactive eBooks incorporate multimedia elements, quizzes, and activities, enhancing the reader engagement and providing a more immersive learning experience. Sample Observation Paper is one of the best book in our library for free trial. We provide copy of Sample Observation Paper in digital format, so the resources that you find are reliable. There are also many Ebooks of related with Sample Observation Paper. Where to download Sample Observation Paper online for free? Are you looking for Sample Observation Paper PDF? This is definitely going to save you time and cash in something you should think about.

### Find Sample Observation Paper :

[origine du nom de famille stahl oeuvres courtes](#)

~~[origine du nom de famille raoult oeuvres courtes](#)~~

**[origine du nom de famille sabatier oeuvres courtes](#)**

~~[origine du preacutenom gontran oeuvres courtes](#)~~

[origine du preacutenom annie oeuvres courtes](#)

*orion sled2468w manual*

*origine du preacutenom franck oeuvres courtes*

*ortho insight 3d manual*

**[origine du nom de famille monribot oeuvres courtes](#)**

*origine du nom de famille roualdegraves oeuvres courtes*  
*orphans lambs of god four mail order bride romances*  
~~oscilloscope applications experiments by edward m noll~~  
~~orion subwoofers user guide~~  
~~origine du nom de famille staub oeuvres courtes~~  
origine du nom de famille roubinet oeuvres courtes

### **Sample Observation Paper :**

finding nemo marine ecology concepts by hashtag scienced - Aug 28 2022

web apr 4 2023 money for finding nemo concepts of biology answers and numerous book collections from fictions to scientific research in any way in the course of them is

finding nemo concepts of biology answers 2023 - Nov 30 2022

web below you will find an array of free resources for you and your classroom clicking on the title takes you to the resource described the 500 most recent entries are displayed

*finding nemo concepts of biology answers* - Apr 23 2022

web examples of potential biology topics in finding nemo pixar animation studios 2003 g level topic basic intermediate advanced open clownfish mating what is a typical

finding nemo concepts of biology answers pdf - May 25 2022

web may 16 2023 finding nemo concepts of biology answers pixar demands competent evil will always be overcome with little permanent loss by giddy goodness pixar says

**marine science final exam finding nemo flashcards quizlet** - Jul 07 2023

web find rate and share the best memes and images discover the magic of the internet at imgur

*examples of potential biology topics in finding nemo pixar* - Feb 19 2022

web finding nemo concepts of biology answers opacity nassim nicholas taleb hold your hippogriffs tv tropes google expat dating in germany chatting and dating front page

**finding nemo concepts of biology answers darelova** - Mar 23 2022

web periodical finding nemo concepts of biology answers that you are looking for browse the finding nemo concepts of biology answers join that we have the

*finding nemo concepts of biology answers htaccess guide* - Jun 25 2022

web finding nemo concepts of biology answers you will find an array of free resources for you and your classroom clicking on



the title takes you to the resource described the 500

**finding nemo genetics worksheets learny kids** - Feb 02 2023

web finding nemo concepts of biology answers book review unveiling the magic of language in a digital era where connections and knowledge reign supreme the

nemo definition usage examples dictionary com - Nov 18 2021

finding nemo worksheet answer key answers for 2023 exams - Sep 09 2023

web name two examples of this type of organism found in finding nemo below are organisms that are attached to the bottom of the sea floor name one example of this

*finding nemo genetics worksheets kiddy math* - Jan 01 2023

web jul 1 2023 finding nemo concepts of biology answers 1 1 downloaded from uniport edu ng on july 1 2023 by guest

finding nemo concepts of biology answers

finding nemo concepts of biology answers pdf uniport edu - Oct 30 2022

web in this ecology worksheet students will watch finding nemo to learn about some of the common ecology concepts including classification symbiotic relationships ecosystems

**how finding nemo is related to science by zoe rucker** - Apr 04 2023

web displaying top 8 worksheets found for finding nemo genetics some of the worksheets for this concept are finding nemo genetics student activity finding nemo work

**finding nemo concepts of biology answers imgur** - Jun 06 2023

web feb 28 2023 finding nemo concepts of biology answers 1 1 downloaded from uniport edu ng on february 28 2023 by guest finding nemo concepts of biology

**finding nemo genetics worksheets teacher worksheets** - Mar 03 2023

web finding nemo genetics displaying top 8 worksheets found for this concept some of the worksheets for this concept are finding nemo genetics student activity finding nemo

**finding nemo concepts of biology answers top ic edu sa** - Dec 20 2021

**finding nemo concepts of biology answers banpaen** - Jul 27 2022

web you could purchase lead finding nemo concepts of biology answers pdf or get it as soon as feasible you could speedily download this finding nemo concepts of

finding nemo concepts of biology answers pdf uniport edu - May 05 2023

web showing top 8 worksheets in the category finding nemo genetics some of the worksheets displayed are finding nemo genetics student activity finding nemo work

finding nemo concepts of biology answers copy pivotid uvu - Oct 10 2023

web finding nemo concepts of biology answers finding nemo concepts of biology answers 4 downloaded from pivotid uvu edu on 2021 07 08 by guest maintain the

**finding nemo concepts of biology answers dream networkonair** - Sep 28 2022

web jun 9 2023 finding nemo concepts of biology answers nonetheless when realize you give a constructive answer that you require to get those every needs in the in the

**finding nemo concepts of biology answers heloc mafcu** - Jan 21 2022

web nemo definition see examples of nemo used in a sentence

**finding nemo biological facts by halle collins prezi** - Aug 08 2023

web example of an organism from phylum cnideria jellyfish what type of animal does nemo get stuck in when he is getting ready for school two characteristics of marlin is scared

*santa cruise audiobook by mary higgins clark carol higgins* - Jun 07 2022

web a terrified mystery fan swears she has spotted the ghost of honor in the ship s chapel two santa suits disappear from a locked supply room a storm develops and in the infirmary

**santa cruise a holiday mystery at sea clark mary higgins** - Feb 15 2023

web nov 14 2006 by mary higgins clark first published november 14th 2006 sort by format editions showing 1 30 of 58 santa cruise a holiday mystery at sea hardcover

*santa cruise a holiday mystery at sea clark mary higgins* - Oct 31 2021

**mary higgins clark santa cruise** - Mar 04 2022

web santa cruise a holiday mystery at sea by clark mary higgins clark carol higgins publication date 2006 topics reilly regan fictitious character meehan alvirah

**santa cruise a holiday mystery at sea clark mary higgins** - Jun 19 2023

web santa cruise a holiday mystery at sea mary higgins clark carol higgins clark scribner 22 261pp isbn 978 1 4165 3552 2 at the start of the lighthearted fourth

santa cruise a holiday mystery at sea by mary higgins clark - Mar 16 2023

web santa cruise a holiday mystery at sea by clark mary higgins clark carol higgins isbn 10 1416535527 isbn 13 9781416535522 scribner 2006 hardcover

**santa cruise a holiday mystery at sea clark mary higgins** - Jul 20 2023

web buy santa cruise by higgins clark mary isbn 9781416526759 from amazon s book store everyday low prices and free delivery on eligible orders

*santa cruise a holiday mystery at sea clark mary higgins* - May 06 2022

web nov 20 2013 amateur sleuth alvirah meehan and p i regan reilly take to the high seas and hit troubled waters when mayhem ensues learn more about santa cruise at

**santa cruise a holiday mystery at sea ebook clark** - Jan 14 2023

web oct 27 2009 simon and schuster oct 27 2009 fiction 272 pages america s queen of suspense mary higgins clark joins forces with her daughter carol bestselling

*mary higgins clark santa cruise youtube* - Feb 03 2022

**editions of santa cruise a holiday mystery at sea by mary** - Nov 12 2022

web santa cruise a holiday mystery at sea clark mary higgins free download borrow and streaming internet archive santa cruise a holiday mystery at sea by clark mary

santa cruise a holiday mystery at sea mary higgins clark - Oct 11 2022

web america s queen of suspense mary higgins clark joins forces with her daughter carol bestselling author of the regan reilly mysteries in this fast paced novel set on a

**santa cruise a holiday mystery at sea clark mary higgins** - Aug 09 2022

web clark mary higgins prose criticism mystery and suspense fiction fiction fiction mystery detective mystery suspense mystery detective women sleuths mystery

**santa cruise a holiday mystery at sea clark mary** - Jan 02 2022

**santa cruise a holiday mystery at sea clark mary** - Apr 17 2023

web america s queen of suspense mary higgins clark joins forces with her daughter carol bestselling author of the regan reilly mysteries in this fast paced novel set on

santa cruise a holiday mystery at sea clark mary - Sep 22 2023

web jan 1 2006 santa cruise a holiday mystery at sea clark mary higgins clark carol higgins on amazon com free shipping on qualifying offers santa cruise a

**santa cruise amazon co uk higgins clark mary** - May 18 2023

web oct 30 2007 santa cruise a holiday mystery at sea mass market paperback oct 30 2007 by mary higgins clark author

carol higgins clark author 4 2 1 010 ratings

*santa cruise a holiday mystery at sea mary higgins clark* - Sep 10 2022

web carol higgins clark 1956 2023 was the bestselling author of the regan reilly mysteries she was the daughter of suspense writer mary higgins clark with whom she

santa cruise a holiday mystery at sea clark mary higgins - Dec 13 2022

web queen of suspense mary higgins clark joins forces with her daughter bestselling author carol higgins clark in this fast paced novel set on board a holiday cruise that sets sail

**santa cruise a holiday mystery at sea mary higgins clark** - Jul 08 2022

web sep 4 2008 santa cruise mary higgins clark carol higgins clark simon and schuster sep 4 2008 fiction 272 pages alvirah meehan the lottery winner turned amateur

**santa cruise a holiday mystery at sea clark mary higgins** - Dec 01 2021

**santa cruise mary higgins clark carol higgins clark google** - Apr 05 2022

web santa cruise a holiday mystery at sea by clark mary higgins clark carol higgins

*santa cruise a holiday mystery at sea amazon com* - Aug 21 2023

web jan 1 2007 a holiday mystery at sea america s queen of suspense mary higgins clark joins forces with her daughter carol bestselling author of the regan

social responsibilities of business and business ethics toppr - Feb 14 2022

web social responsibilities of business and business ethics are you aware of the concept of the triple bottom line it is a concept that believes that a business can fulfil three responsibilities namely environmental financial and social responsibilities

*chapter 9 business ethics and social responsibility* - Dec 15 2021

web chapter 9 ethics summary of chapter 9 of business ethics by denis collins the fundamentals of ethics chapter 9

consequentialism its nature and attractions the cost of capital chapter 9 business ethics lecture chapters 9 10 introduction

**corporate ethics and social responsibility mastering strategic** - Nov 25 2022

web learning objectives know the three levels and six stages of moral development suggested by kohlberg describe famous corporate scandals understand how bill 198 of 2002 provides a check on corporate ethical behaviour in canada know the dimensions of

**chapter 9 business ethics and social responsibility pdf** - Oct 25 2022

web academic year 2015 2016summary business ethics chapter 1 9 studoculearn and understand the educator verified

answer and explanation for chapter 9 problem 2 in ferrell fraedrich s business ethics ethical decision making cases 12th edition

chapter 9 ethics corporate social responsibility environment - Aug 23 2022

web sep 21 2022 chapter 9 ethics corporate social responsibility environmental sustainability and strategy 1 learning objectives this chapter will help you understand how the standards of ethical behavior in business are no different from business ethics and social responsibility mcgraw - Dec 27 2022

web describe the process of rationalizing unethical behavior explain ethics in the context of the u s workplace describe the influence of group goals on ethics give examples of global ethics issues define social responsibility describe the process of whistleblowing

*chapter 9 management ethics and social responsibility* - Apr 18 2022

web chapter 9 management ethics and social responsibility learning objectives after studying this chapter you should be able to 1 describe the two broad categories of ethical theories 2 explain what individuals need in order to act ethically 3 describe the

ethics corporate social responsibility environmental - Jul 02 2023

web for more detailed information see chapter 9 we move forward in this chapter therefore to an initial consideration of kindness as an organisational value and how it can be exemplified it is based primarily on research and our own experience rather than

**9 ethics corporate social responsibility environmental** - Oct 05 2023

this chapter will help you understand lo 1how the standards of ethical behavior in business are no different from the ethical standards and norms of the larger society and culture in which a company operates lo 2what drives unethical business strategies and behavior lo 3the costs of see more

*3 4 corporate social responsibility csr business* - Jan 28 2023

web this section focuses on the business firm as a stakeholder in its environment and examines the concept of a corporation as a socially responsible entity conscious of the influences it has on society that is we look at the role companies and large corporations in

*chapter 9 corporate social responsibility* - Jun 01 2023

web a explain the concept and rationale of corporate social responsibility csr b describe and evaluate the economic philanthropic social web and integrative models of csr c discuss how companies develop and sustain their csr programs and practices

*chapter 9 ethical business strategies social responsibility and* - May 20 2022

web become familiar with both the moral case and the business case for ethical business conduct and socially responsible business behavior 9 2 chapter roadmap what do we mean by business ethics where do ethical standards come from are they *business ethics social responsibility definition differences* - Jun 20 2022

web dec 8 2021 a business is best run when its management takes into consideration ethical operation and observes social responsibility learn more about the definition the differences between ethics and why business ethics are important for your organization - Sep 23 2022

web apr 5 2023 in many ways business ethics go hand in hand with social responsibility both concepts are essential in every workplace including nonprofit organizations activities and operations here we help you better understand the concept of business ethics by

*11 4 corporate ethics and social responsibility* - Feb 26 2023

web chapter 9 business ethics and corporate social responsibility quiz show all questions 1 15 these questions are designed to test your understanding of the material contained within each chapter for each question you are given a choice of 4 business ethics and corporate social responsibility routledge - Sep 04 2023

ethics concerns principles of right or wrong conduct business ethics is the application of ethical principles and standards to the actions and decisions of business organizations and the conduct of their personnel 1 see more

*chapter 9 business ethics and corporate social* - Mar 30 2023

web chapter 9 corporate social responsibility introduction thus far we have emphasized ethical behavior inside the organization we have discussed why ethical behavior is important at work and how individuals who aim to be ethical can social responsibilities of business and business ethics - Jan 16 2022

web aug 10 2021 these are the various types of business ethics as per the chapter social responsibility of business and business ethics commitment to excellence ethical executives lead to a commitment to excellence which demonstrates personal integrity

**module 9 business ethics and social responsibility** - Aug 03 2023

many companies have acknowledged their ethical obligations in official codes of ethical conduct in the united states for example the see more

*dokumen tips chapter 9 ethics corporate social* - Mar 18 2022

web chapter 9 ethics corporate social responsibility environmental sustainability and strategy 1 understand how the standards of ethical behavior in business are no different from the ethical standards and norms of the larger society

**chapter 9 ethical business strategies social responsibility and** - Jul 22 2022

web jul 2 2012 chapter 9 ethical business strategies social responsibility and environmental sustainability screen graphics

created by jana f kuzmicki ph d troy university figure 9 1 the business costs of ethical failures 8 2 slideshow 515774

chapter 4 ethics and social responsibility - Apr 30 2023

we understand how the standards of ethical behavior in business are no different from the ethical standards and norms of the larger society and culture in which a company operates recognize conditions that can give rise to unethical business strategies and behavior