

Transcription and Translation Worksheet

Name ANSWER KEY

Hour _____ Date _____

For each of the following sequences, fill in either the DNA, the mRNA sequence, the tRNA anticodons, or the amino acid sequences that have been left blank. If several sequences might work choose any one.

1. DNA TAC TGA TCG ACC CCC ATA ATG AAA ATC
 mRNA AUG ACU AGC UGG GGG UAU UAC UUU UAG
 tRNA UAC UGA UCG ACC CCC AUA AUG AAA AUC
 AA MET THR SER TRY GLY TYR TYR PHE STOP

2. DNA TAC CGC TCC GCC GTC GAC AAT ACC ACT
 mRNA AUG GCG AGG CGG CAG CUG UUA UGG UGA
 tRNA UAC CGC UCC GCC GUC GAC AAU ACC ACU
 AA MET ALA ARG ARG GLU LEU LEU TRY STOP

3. DNA TAC CAC CCC CGT ATG GCT GGG AAT ATC
 mRNA AUG GUG GGG GCA UAC CGA CCC UUA UAG
 tRNA UAC CAC CCC CGU AUG GCU GGG AAU AUC
 AA MET VAL GLY ALA TYR ARG PRO LEU STOP

SEVERAL POSSIBILITIES

4. DNA TAC TCT CCC AAA AAA TAC CAC CCC ATC
 mRNA AUG AGA GGG UUU UUU AUG GUG GGG UAG
 tRNA UAC UCU CCC AAA AAA UAC CAC CCC AUC
 AA MET ARG GLY PHE PHE MET VAL GLY (STOP)

5. DNA TAC CTC ACA CTA CGC ATG TTG GGG ATT
 mRNA AUG GAG UGU GAU GCG UAC AAC CCC UAA
 tRNA UAC CUC ACA CUA CGC AUG UUG GGG AUU
 AA MET Glu A CYS Asp A ALA TYR ASP PRO STOP

Answer Key To Transcription And Translation Practice

Talk To Me In Korean



Answer Key To Transcription And Translation Practice:

Yeah, reviewing a book **Answer Key To Transcription And Translation Practice** could ensue your close links listings. This is just one of the solutions for you to be successful. As understood, triumph does not suggest that you have astounding points.

Comprehending as capably as arrangement even more than further will provide each success. next to, the declaration as competently as perspicacity of this Answer Key To Transcription And Translation Practice can be taken as well as picked to act.

<https://legacy.tortoisemedia.com/files/scholarship/Documents/travel%20guide%20manual.pdf>

Table of Contents Answer Key To Transcription And Translation Practice

1. Understanding the eBook Answer Key To Transcription And Translation Practice
 - The Rise of Digital Reading Answer Key To Transcription And Translation Practice
 - Advantages of eBooks Over Traditional Books
2. Identifying Answer Key To Transcription And Translation Practice
 - 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 Answer Key To Transcription And Translation Practice
 - User-Friendly Interface
4. Exploring eBook Recommendations from Answer Key To Transcription And Translation Practice
 - Personalized Recommendations
 - Answer Key To Transcription And Translation Practice User Reviews and Ratings
 - Answer Key To Transcription And Translation Practice and Bestseller Lists
5. Accessing Answer Key To Transcription And Translation Practice Free and Paid eBooks
 - Answer Key To Transcription And Translation Practice Public Domain eBooks

- Answer Key To Transcription And Translation Practice eBook Subscription Services
- Answer Key To Transcription And Translation Practice Budget-Friendly Options
- 6. Navigating Answer Key To Transcription And Translation Practice eBook Formats
 - ePub, PDF, MOBI, and More
 - Answer Key To Transcription And Translation Practice Compatibility with Devices
 - Answer Key To Transcription And Translation Practice Enhanced eBook Features
- 7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Answer Key To Transcription And Translation Practice
 - Highlighting and Note-Taking Answer Key To Transcription And Translation Practice
 - Interactive Elements Answer Key To Transcription And Translation Practice
- 8. Staying Engaged with Answer Key To Transcription And Translation Practice
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Answer Key To Transcription And Translation Practice
- 9. Balancing eBooks and Physical Books Answer Key To Transcription And Translation Practice
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Answer Key To Transcription And Translation Practice
- 10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
- 11. Cultivating a Reading Routine Answer Key To Transcription And Translation Practice
 - Setting Reading Goals Answer Key To Transcription And Translation Practice
 - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Answer Key To Transcription And Translation Practice
 - Fact-Checking eBook Content of Answer Key To Transcription And Translation Practice
 - 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

Answer Key To Transcription And Translation Practice Introduction

Free PDF Books and Manuals for Download: Unlocking Knowledge at Your Fingertips In today's fast-paced digital age, obtaining valuable knowledge has become easier than ever. Thanks to the internet, a vast array of books and manuals are now available for free download in PDF format. Whether you are a student, professional, or simply an avid reader, this treasure trove of downloadable resources offers a wealth of information, conveniently accessible anytime, anywhere. The advent of online libraries and platforms dedicated to sharing knowledge has revolutionized the way we consume information. No longer confined to physical libraries or bookstores, readers can now access an extensive collection of digital books and manuals with just a few clicks. These resources, available in PDF, Microsoft Word, and PowerPoint formats, cater to a wide range of interests, including literature, technology, science, history, and much more. One notable platform where you can explore and download free Answer Key To Transcription And Translation Practice PDF books and manuals is the internet's largest free library. Hosted online, this catalog compiles a vast assortment of documents, making it a veritable goldmine of knowledge. With its easy-to-use website interface and customizable PDF generator, this platform offers a user-friendly experience, allowing individuals to effortlessly navigate and access the information they seek. The availability of free PDF books and manuals on this platform demonstrates its commitment to democratizing education and empowering individuals with the tools needed to succeed in their chosen fields. It allows anyone, regardless of their background or financial limitations, to expand their horizons and gain insights from experts in various disciplines. One of the most significant advantages of downloading PDF books and manuals lies in their portability. Unlike physical copies, digital books can be stored and carried on a single device, such as a tablet or smartphone, saving valuable space and weight. This convenience makes it possible for readers to have their entire library at their fingertips, whether they are commuting, traveling, or simply enjoying a lazy afternoon at home. Additionally, digital files are easily searchable, enabling readers to locate specific information within seconds. With a few keystrokes, users can search for keywords, topics, or phrases, making research and finding relevant information a breeze. This efficiency saves time and effort, streamlining the learning process and allowing individuals to focus on extracting the information they need. Furthermore, the availability of free PDF books and manuals fosters a culture of continuous learning. By removing financial barriers, more people can access educational resources and pursue lifelong learning, contributing to personal growth and professional development. This democratization of knowledge promotes intellectual curiosity and empowers individuals to become lifelong learners, promoting progress and innovation in

various fields. It is worth noting that while accessing free Answer Key To Transcription And Translation Practice PDF books and manuals is convenient and cost-effective, it is vital to respect copyright laws and intellectual property rights. Platforms offering free downloads often operate within legal boundaries, ensuring that the materials they provide are either in the public domain or authorized for distribution. By adhering to copyright laws, users can enjoy the benefits of free access to knowledge while supporting the authors and publishers who make these resources available. In conclusion, the availability of Answer Key To Transcription And Translation Practice free PDF books and manuals for download has revolutionized the way we access and consume knowledge. With just a few clicks, individuals can explore a vast collection of resources across different disciplines, all free of charge. This accessibility empowers individuals to become lifelong learners, contributing to personal growth, professional development, and the advancement of society as a whole. So why not unlock a world of knowledge today? Start exploring the vast sea of free PDF books and manuals waiting to be discovered right at your fingertips.

FAQs About Answer Key To Transcription And Translation Practice Books

What is a Answer Key To Transcription And Translation Practice PDF? A PDF (Portable Document Format) is a file format developed by Adobe that preserves the layout and formatting of a document, regardless of the software, hardware, or operating system used to view or print it. **How do I create a Answer Key To Transcription And Translation Practice PDF?** There are several ways to create a PDF: Use software like Adobe Acrobat, Microsoft Word, or Google Docs, which often have built-in PDF creation tools. Print to PDF: Many applications and operating systems have a "Print to PDF" option that allows you to save a document as a PDF file instead of printing it on paper. Online converters: There are various online tools that can convert different file types to PDF. **How do I edit a Answer Key To Transcription And Translation Practice PDF?** Editing a PDF can be done with software like Adobe Acrobat, which allows direct editing of text, images, and other elements within the PDF. Some free tools, like PDFescape or Smallpdf, also offer basic editing capabilities. **How do I convert a Answer Key To Transcription And Translation Practice PDF to another file format?** There are multiple ways to convert a PDF to another format: Use online converters like Smallpdf, Zamzar, or Adobe Acrobats export feature to convert PDFs to formats like Word, Excel, JPEG, etc. Software like Adobe Acrobat, Microsoft Word, or other PDF editors may have options to export or save PDFs in different formats. **How do I password-protect a Answer Key To Transcription And Translation Practice PDF?** Most PDF editing software allows you to add password protection. In Adobe Acrobat, for instance, you can go to "File" -> "Properties" -> "Security" to set a password to restrict access or editing capabilities. Are there any free alternatives to Adobe Acrobat for working with PDFs? Yes, there are many free alternatives for working with

PDFs, such as: LibreOffice: Offers PDF editing features. PDFsam: Allows splitting, merging, and editing PDFs. Foxit Reader: Provides basic PDF viewing and editing capabilities. How do I compress a PDF file? You can use online tools like Smallpdf, ILovePDF, or desktop software like Adobe Acrobat to compress PDF files without significant quality loss. Compression reduces the file size, making it easier to share and download. Can I fill out forms in a PDF file? Yes, most PDF viewers/editors like Adobe Acrobat, Preview (on Mac), or various online tools allow you to fill out forms in PDF files by selecting text fields and entering information. Are there any restrictions when working with PDFs? Some PDFs might have restrictions set by their creator, such as password protection, editing restrictions, or print restrictions. Breaking these restrictions might require specific software or tools, which may or may not be legal depending on the circumstances and local laws.

Find Answer Key To Transcription And Translation Practice :

[travel guide manual](#)

[ideas travel guide](#)

[tips yoga guide](#)

[ideas music learning](#)

[pro music learning](#)

gardening tips ideas

music learning for beginners

[quick start home diy](#)

[quick start gardening tips](#)

[wellness planner tricks](#)

photography tutorial manual

2026 guide home diy

[manual language learning](#)

[wellness planner pro](#)

[fan favorite fitness workout](#)

Answer Key To Transcription And Translation Practice :

baby shower word search 100 free downloadable and printable - Feb 10 2023

web mar 17 2021 share 0 comments featuring a 20 x 20 grid and twenty unique baby shower related words hidden both

forwards and backwards up and down this baby shower word search is guaranteed to challenge you and each of your baby shower attendee s brains

[babyshower word search etsy](#) - Jun 02 2022

web check out our babyshower word search selection for the very best in unique or custom handmade pieces from our party games shops

baby shower word search with answer key tulamama - Jun 14 2023

web oct 19 2020 baby shower word search and word scrambles are classic baby shower games this game is similar to typical word search games except here you re searching for baby and pregnancy related words the difficulty level is around medium so as not to make it too easy for everyone

free printable baby shower word search the postpartum party - Sep 05 2022

web feb 15 2020 how to play baby shower word search word searches are a great activity play this game as an ice breaker or to keep guests busy while the new mom opens all her gifts just print this free baby shower word search pass out to guests with a pen or pencil and let them hunt for words

printable baby shower word search with answer key - Jul 15 2023

web baby shower word search is a fun game where guests will search for the hidden words related with baby and pregnancy simply download print and play

[baby shower word search etsy](#) - Jan 29 2022

web check out our baby shower word search selection for the very best in unique or custom handmade pieces from our party games shops

14 exciting baby shower word search printables - Aug 04 2022

web apr 24 2020 free and printable baby shower word search printables the word search riddles are for everyone from novice to expert people the fun part is that every word is related to babies that makes it relevant to the theme of the party

free printable baby shower word search i spy fabulous - Mar 11 2023

web sep 3 2019 baby shower word search a word search game is such an easy game to use at a baby shower whether you use it in between sillier games to give everyone a chance to have a snack and sit down or you just leave them on tables with some pencils for quieter guests who may need a break from the festivities word search games are such

baby shower word search free printable game - Jan 09 2023

web pin get this free printable baby shower word search gamefor your next baby shower this is the perfect way to entertain your guests with this word search puzzle they can all search for the baby shower words at the bottom of the game and the first person to find the list of words wins the game

baby shower word search diy printable generators - May 01 2022

web baby shower word search to download and print or play online add your own words to customize or start creating from scratch recommended check out this advance word search maker to create commercial use printable puzzles title words list

free baby shower word search printable game the typical mom - Dec 28 2021

web jun 9 2023 here is how to play create a word search puzzle related to babies pregnancy or parenting or just print ours below you can use a word search generator to customize one according to your preferences ensure that the puzzle contains relevant words or phrases that guests can search for

[baby shower word search play online print](#) - Dec 08 2022

web free baby shower word search online game enjoy our free baby shower word search puzzle online in real time battle with your friend or play a classic single player game there are easy medium and hard difficulty levels for new and advanced players

free baby shower word search printable 4 designs - Jul 03 2022

web sep 3 2023 leap of faith crafting free baby shower word search printable 4 designs september 3 2023 affiliate disclosure as an amazon associate i earn from qualifying purchases instant download of four different baby shower word search printables to print at home and use at the next baby shower

free printable baby shower word search game with answers - Aug 16 2023

web baby word search game baby shower word search is just like any word search game it s one of the most popular baby shower games and the reason is obvious it s simple easy and requires no effort for preparation

baby shower word search wordmint - Nov 07 2022

web they help to encourage wider vocabulary as well as testing cognitive abilities and pattern finding skills because the word search templates are completely custom you can create suitable word searches for children in kindergarten all the way up to college students

baby shower word searches etsy - Oct 06 2022

web check out our baby shower word searches selection for the very best in unique or custom handmade pieces from our shops

[22 printable baby shower word scrambles the spruce crafts](#) - May 13 2023

web jul 20 2021 updated on 07 20 21 the spruce kori livingston baby shower word scrambles are a fun baby shower game that will have your guests racing to see who can unscramble the baby and pregnancy related words first the baby shower word scramble puzzles below are all free and can be printed within minutes

free printable new baby word search world of printables - Apr 12 2023

web oct 24 2020 this beautiful new baby word search is one of our most popular word searches this gorgeous word search is a great freebie for using as a baby shower game and even a great way to introduce your child to the idea of a new baby and what to expect

25 free printable baby shower word scramble games - Mar 31 2022

web jun 30 2023 all you need are some printable scrambled riddles and some pens to get started this post includes the links to free and easy to download word scramble puzzles for baby showers and the scrambling sheets have been designed to fit some of the most popular baby shower themes

baby shower word search game free printable with answer key - Feb 27 2022

web grab your free baby shower word search game printable pdf and answer key to play the next time you host a baby shower click the link below the image to download your preferred baby shower word search pdf

75 pupil human resource director interview questions answers - Mar 28 2023

web 1 what critical component of this position as pupil human resource director makes the work challenging heading information this should include job title pay grade or range reporting relationship by position not individual hours or shifts and the likelihood of overtime or weekend work

18 director interview questions and answers climb - Feb 12 2022

web feb 23 2022 common director interview questions what do you know about our company and our industry what is your management style what are your strengths as a leader what are your long term career goals describe your process for organizing and completing projects tell me about a time when you had to resolve a conflict

director of pupil personnel program interview questions - Jun 30 2023

web interview questions for a director of pupil personnel program plan direct or coordinate the academic administrative or auxiliary activities of public or private elementary or secondary level schools

interview questions for director of pupil personnel book - Apr 16 2022

web feb 28 2023 proclamation interview questions for director of pupil personnel as skillfully as evaluation them wherever you are now

director of student services interview questions glassdoor - Dec 25 2022

web aug 23 2013 20 director of student services interview questions shared by candidates top interview questions sort relevance popular date director of student services was asked november 16 2020 how i work to help student students 1 answers i described my current role in ways i help my students currently

pupil interview questions glassdoor - Jul 20 2022

web pupil interview details 6 interview questions and 6 interview reviews posted anonymously by pupil interview candidates

interview questions for director of pupil personnel - Jan 26 2023

web interview questions for director of pupil personnel audio interview interview with dr carlo musso on the participation of physicians in capital punishment 9 31 download on february 14 2006 a u s district court issued an unprecedented ruling concerning the california execution by lethal injection of murderer michael morales

39 director interview questions with example answers - Nov 23 2022

web oct 14 2023 sample director interview questions and answers consider some of these questions directors routinely get and examples of how to answer them 1 what do you do to manage your workload effectively when you encounter this commonly asked question during your interview take the opportunity to explain your time management strategies

interview questions for director of pupil personnel united - Mar 16 2022

web question tell me about a time when you had to rely on written personnel officer communication to get your ideas across to your team selecting and developing people question how often do you discuss a subordinates personnel officer performance with him her basic interview question why are you leaving your present personnel officer

pupil personnel services director interview questions and - Oct 03 2023

web question 1 how well do you know our company answer well a developed company that is gradually building their reputation in the competitive world read more answers question 2 what do you like to do answer discuss your passions as pupil personnel services director ideally if it s work related that s fantastic

30 director interview questions with example answers - Aug 01 2023

web jul 21 2022 listed below are some common director interview questions an interviewer may ask to get to know you and better understand your motivation why are you leaving your current job do you believe you ll be a good match for this position why do you believe this can you tell me something about our company can you describe your

pupil personnel services director interview questions - Apr 28 2023

web these are the most common pupil personnel services director interview questions and how to answer them 1 what are your qualifications for the pupil personnel services director position

20 director of student services interview questions and answers - Aug 21 2022

web feb 4 2023 1 what strategies do you use to ensure that students are receiving the best possible support services this question is designed to understand how you prioritize your job and the strategies you use to ensure that students are receiving the best possible support services

30 school principal job interview questions and answers q a - May 18 2022

web jan 7 2021 what is competency based education pros cons 2022 03 may 2022 these school principal job interview questions and answers help both the school s recruitment management and the aspiring principals to procure dedicated

teachers lecturers and administrators as well as aid the latter to ace the interview seamlessly

67 pupil personnel services director interview questions answers - Sep 02 2023

web how well do you know our company what do you like to do tell me about a decision you made recently and how you reached it as pupil personnel services director how do you propose to compensate for your lack of experience what kind of car do you drive

interview questions for director of pupil services allnurses - Sep 21 2022

web may 6 2010 interview questions for director of pupil services specialties school published may 6 2010 by mandm97 rn specializes in school nurse supervisor hello fellow school nurses i ve been asked to be on a interview committee for our director of pupil services this position is in charge of the nursing department

inter questions for director of pupil personnel book wp publish - May 30 2023

web inter questions for director of pupil personnel adopting the track of term an emotional symphony within inter questions for director of pupil personnel in some sort of taken by displays and the ceaseless chatter of fast communication the melodic splendor

pupil personnel program director interview questions youtube - Feb 24 2023

web jul 22 2017 interview questions for pupil personnel program director what encouragement preparation would you demand being capable to do this pupil personnel program director job what would be

pupil personnel interview questions glassdoor - Oct 23 2022

web jun 27 2021 1 pupil personnel interview questions shared by candidates top interview questions sort relevance popular date pupil personnel services was asked june 27 2021 explain to us how you will navigate and advocate for families while working within a interdisciplinary team interviews pupil personnel 1

interview questions for director of pupil personnel book - Jun 18 2022

web recognizing the habit ways to acquire this book interview questions for director of pupil personnel is additionally useful you have remained in right site to begin getting this info acquire the interview questions for director of pupil personnel colleague that we come up with the money for here and check out the link

2308 ieee transactions on computers vol 62 no - Jul 13 2023

web network topology is always a key functional issue in design of wireless networks for different network 2308 ieee transactions on computers vol 62 no 11

ieeetransactionsonnetworkingyear2013topological download - Nov 05 2022

web robustness optimization for iot topology ieeetransactionsonnetworkingyear2013topological downloaded from

ieee transactions on networking year 2013 topological andrey - May 31 2022

web ieee transactions on networking year 2013 topological right here we have countless book ieee transactions on networking year 2013 topological and collections to

ieee transactions on networking year 2013 topological - Nov 24 2021

web ieee transactions on networking year 2013 topological is available in our publication accumulation an online access to it is set as public so you can get it swiftly eventually

ieeetransactionsonnetworkingyear2013topological pdf - May 11 2023

web modularity and dynamics on complex networks network topology in command and control organization operation and evolution fundamentals of iot and wearable

ieee transactions on engineering management 1 - Aug 02 2022

web ieee transactions on engineering management 1 supply chain network robustness against disruptions topological analysis measurement and optimization

2013 index ieee transactions on network and service - Jun 12 2023

web 2013 index ieee transactions on network and service management abstract this index covers all technical items papers correspondence reviews etc that appeared in this

network topology description and visualization ieee conference - Feb 08 2023

web aug 22 2010 abstract this paper explains some existing challenges for network topology visualization an xml schema for network topology description is proposed

ieee transactions on neural networks a publication of the ieee - Oct 24 2021

web ieee transactions on neural networks a publication of the ieee neural networks council published by institute of electrical and electronics engineers

ieee acm transactions on networking table of contents - Apr 10 2023

web ieee acm transactions on networking table of contents volume 30 issue 02 april 2022 please note that all publication formats pdf epub and zip are posted as they

top 33 ieee transactions on network and service management - Apr 29 2022

web feb 3 2013 explore 33 research articles published in the journal ieee transactions on network and service management in the year 2013 the journal publishes majorly in the

ieee transactions on networking year 2013 topological - Mar 09 2023

web ieee transactions on networking year 2013 analysis of the topology to determine where tunnels need to be added the problem of nding the minimum number of edges

ieee transactions on networking year 2013 topological - Jul 01 2022

web ieee transactions on networking year 2013 topological sisterly networks jun 05 2020 tracing the development of the field of southern women s history over the past half

ieee acm transactions on networking table of contents - Oct 04 2022

web ieee acm transactions on networking table of contents volume 31 issue 03 june 2023 please note that all publication formats pdf epub and zip are posted as they

ieee transactions on networking year 2013 topological pdf 2023 - Dec 26 2021

web apr 25 2023 ieee transactions on networking year 2013 topological pdf eventually you will categorically discover a supplementary experience and feat by spending more

ieee transactions on networking year 2013 topological pdf - Sep 03 2022

web mar 8 2023 networks in iot domains sanjeev j wagh 2022 08 04 this book provides an essential overview of iot energy efficient topology control protocols motivation and

ieee transactions on communications wikipedia - Feb 25 2022

web ieee trans commun ieee transactions on communications is a monthly peer reviewed scientific journal published by the ieee communications society that focuses on all

ieee transactions on network science and engineering - Dec 06 2022

web journal homepage ieee transactions on network science and engineering is a quarterly peer reviewed scientific journal published by the ieee communications society it

ieee transactions on computers wikipedia - Mar 29 2022

web ieee transactions on computers is a monthly peer reviewed scientific journal covering all aspects of computer design it was established in 1952 and is published by the ieee

ieee transactions on network science and engineering ieee - Aug 22 2021

web learn about ieee transactions on network science and engineering the articles in this journal are peer reviewed in accordance with the requirements set ieee account ieee

ieee acm transactions on networking ieee xplore - Aug 14 2023

web ieee acm transactions on networking the articles in this journal are peer reviewed in accordance with the requirements set forth in the

the september 2023 issue of ieee transactions on professional - Sep 22 2021

web sep 12 2023 published on september 12 2023 volume 66 number 3 september 2023 what eye tracking can show us about how people are influenced by deceptive

telecommunication network topology on ieee - Jan 07 2023

web ieee draft standard for information technology telecommunications and information exchange between systems local and metropolitan area networks specific

ieee transactions on networking year 2013 topological lipo - Jan 27 2022

web ieee transactions on networking year 2013 topological right here we have countless books ieee transactions on networking year 2013 topological and collections to