

## AP Biology Math Problems

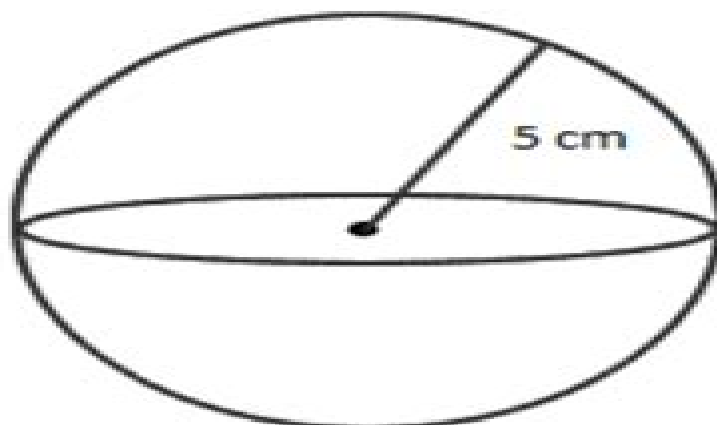
### Q #1: Chi Square

A hetero red eyed female was crossed with a red eyed male. The results are shown below. Red eyes are sex-linked dominant to white, determine **the chi square value**. Round to the nearest hundredth.

| Phenotype  | # flies observed |
|------------|------------------|
| Red Eyes   | 134              |
| White Eyes | 66               |

### Q #2: Surface Area and Volume

- What is the SA/V for this cell? Round your answer to the nearest hundredths.



# Sample Ap Biology Math Problem

**Judy Willis, Malana Willis**



**Sample Ap Biology Math Problem:**

## Unveiling the Energy of Verbal Artistry: An Mental Sojourn through **Sample Ap Biology Math Problem**

In a global inundated with monitors and the cacophony of quick connection, the profound power and psychological resonance of verbal artistry usually diminish into obscurity, eclipsed by the constant assault of sound and distractions. Yet, nestled within the lyrical pages of **Sample Ap Biology Math Problem**, a charming work of literary beauty that impulses with organic feelings, lies an wonderful journey waiting to be embarked upon. Published by a virtuoso wordsmith, this interesting opus instructions visitors on a psychological odyssey, delicately exposing the latent potential and profound influence stuck within the elaborate internet of language. Within the heart-wrenching expanse of this evocative evaluation, we can embark upon an introspective exploration of the book is main subjects, dissect its fascinating writing model, and immerse ourselves in the indelible impression it leaves upon the depths of readers souls.

<https://crm.avenza.com/public/uploaded-files/HomePages/setswana%20p3%20dbe%20ngwabaitseele%202013.pdf>

### **Table of Contents Sample Ap Biology Math Problem**

1. Understanding the eBook Sample Ap Biology Math Problem
  - The Rise of Digital Reading Sample Ap Biology Math Problem
  - Advantages of eBooks Over Traditional Books
2. Identifying Sample Ap Biology Math Problem
  - 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 Ap Biology Math Problem
  - User-Friendly Interface
4. Exploring eBook Recommendations from Sample Ap Biology Math Problem
  - Personalized Recommendations

- Sample Ap Biology Math Problem User Reviews and Ratings
- Sample Ap Biology Math Problem and Bestseller Lists
- 5. Accessing Sample Ap Biology Math Problem Free and Paid eBooks
  - Sample Ap Biology Math Problem Public Domain eBooks
  - Sample Ap Biology Math Problem eBook Subscription Services
  - Sample Ap Biology Math Problem Budget-Friendly Options
- 6. Navigating Sample Ap Biology Math Problem eBook Formats
  - ePub, PDF, MOBI, and More
  - Sample Ap Biology Math Problem Compatibility with Devices
  - Sample Ap Biology Math Problem Enhanced eBook Features
- 7. Enhancing Your Reading Experience
  - Adjustable Fonts and Text Sizes of Sample Ap Biology Math Problem
  - Highlighting and Note-Taking Sample Ap Biology Math Problem
  - Interactive Elements Sample Ap Biology Math Problem
- 8. Staying Engaged with Sample Ap Biology Math Problem
  - Joining Online Reading Communities
  - Participating in Virtual Book Clubs
  - Following Authors and Publishers Sample Ap Biology Math Problem
- 9. Balancing eBooks and Physical Books Sample Ap Biology Math Problem
  - Benefits of a Digital Library
  - Creating a Diverse Reading Collection Sample Ap Biology Math Problem
- 10. Overcoming Reading Challenges
  - Dealing with Digital Eye Strain
  - Minimizing Distractions
  - Managing Screen Time
- 11. Cultivating a Reading Routine Sample Ap Biology Math Problem
  - Setting Reading Goals Sample Ap Biology Math Problem
  - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Sample Ap Biology Math Problem
  - Fact-Checking eBook Content of Sample Ap Biology Math Problem

- 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 Ap Biology Math Problem Introduction**

In today's digital age, the availability of Sample Ap Biology Math Problem books and manuals for download has revolutionized the way we access information. Gone are the days of physically flipping through pages and carrying heavy textbooks or manuals. With just a few clicks, we can now access a wealth of knowledge from the comfort of our own homes or on the go. This article will explore the advantages of Sample Ap Biology Math Problem books and manuals for download, along with some popular platforms that offer these resources. One of the significant advantages of Sample Ap Biology Math Problem books and manuals for download is the cost-saving aspect. Traditional books and manuals can be costly, especially if you need to purchase several of them for educational or professional purposes. By accessing Sample Ap Biology Math Problem versions, you eliminate the need to spend money on physical copies. This not only saves you money but also reduces the environmental impact associated with book production and transportation. Furthermore, Sample Ap Biology Math Problem books and manuals for download are incredibly convenient. With just a computer or smartphone and an internet connection, you can access a vast library of resources on any subject imaginable. Whether you're a student looking for textbooks, a professional seeking industry-specific manuals, or someone interested in self-improvement, these digital resources provide an efficient and accessible means of acquiring knowledge. Moreover, PDF books and manuals offer a range of benefits compared to other digital formats. PDF files are designed to retain their formatting regardless of the device used to open them. This ensures that the content appears exactly as intended by the author, with no loss of formatting or missing graphics. Additionally, PDF files can be easily annotated, bookmarked, and searched for specific terms, making them highly practical for studying or referencing. When it comes to accessing Sample Ap Biology Math Problem books and manuals, several platforms offer an extensive collection of resources. One such platform is Project Gutenberg, a nonprofit organization that provides over 60,000 free eBooks. These books are primarily in the public domain, meaning they can be freely distributed and downloaded. Project Gutenberg offers a wide range of classic literature, making it an excellent resource for literature enthusiasts. Another popular platform for Sample Ap Biology Math Problem books and manuals is Open Library. Open

Library is an initiative of the Internet Archive, a non-profit organization dedicated to digitizing cultural artifacts and making them accessible to the public. Open Library hosts millions of books, including both public domain works and contemporary titles. It also allows users to borrow digital copies of certain books for a limited period, similar to a library lending system. Additionally, many universities and educational institutions have their own digital libraries that provide free access to PDF books and manuals. These libraries often offer academic texts, research papers, and technical manuals, making them invaluable resources for students and researchers. Some notable examples include MIT OpenCourseWare, which offers free access to course materials from the Massachusetts Institute of Technology, and the Digital Public Library of America, which provides a vast collection of digitized books and historical documents. In conclusion, Sample Ap Biology Math Problem books and manuals for download have transformed the way we access information. They provide a cost-effective and convenient means of acquiring knowledge, offering the ability to access a vast library of resources at our fingertips. With platforms like Project Gutenberg, Open Library, and various digital libraries offered by educational institutions, we have access to an ever-expanding collection of books and manuals. Whether for educational, professional, or personal purposes, these digital resources serve as valuable tools for continuous learning and self-improvement. So why not take advantage of the vast world of Sample Ap Biology Math Problem books and manuals for download and embark on your journey of knowledge?

### **FAQs About Sample Ap Biology Math Problem 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 Ap Biology Math Problem is one of the best book in our library for free trial. We provide copy of Sample Ap Biology Math Problem in digital format, so the resources that you find are reliable. There are also many Ebooks of related with Sample Ap Biology Math Problem. Where to download Sample Ap Biology Math Problem online for free? Are you looking for Sample Ap Biology Math Problem PDF? This is definitely going to save you time and cash in something you should think about.

**Find Sample Ap Biology Math Problem :**

*setswana p3 dbe ngwabaitseele 2013*

**sexy anime girls 10 collection of photos**

sharepoint 20basic user guide

~~sew eurodrive motor wiring~~

~~sharp ar 5316 digital copier parts guide~~

**sgo in library media**

sharp bd-hp25u manual

setswana mid year memorandum paper 1

**sharp ar 407 digital copier repair manual**

~~shapes of algebra investigation 3 ace answers~~

*sharp ar m208 digital laser copier printer service manual*

*setting solutions alex anderson*

**sexual scavenger hunt ideas**

*setswana paper examination november 2013 grade 10*

seventh edition marriages families

**Sample Ap Biology Math Problem :**

**book review schubert s winter journey by ian bostridge** - Feb 01 2023

web jan 23 2015 michael o donnell reviews schubert s winter journey anatomy of an obsession by ian bostridge in schubert s winterreise we meet a wanderer in a frozen landscape recalling

[schubert s winter journey anatomy of an obsession by ian](#) - May 24 2022

web schubert s winter journey anatomy of an obsession by ian bostridge download citation schubert s winter journey anatomy of an obsession by ian bostridge schubert is a hell of a drug

**schubert s winter journey by ian bostridge 9780525431800** - Sep 27 2022

web an exploration of the world s most famous and challenging song cycle schubert s winter journey winterreise by a leading interpreter of the work who teases out the themes literary historical psychological that weave through the twenty four songs that make up this legendary masterpiece

**schubert s winter journey anatomy of an obsession** - Sep 08 2023

web in his new book schubert s winter journey anatomy of an obsession ian bostridge one of the work s finest interpreters focusses on the context resonance and personal significance of a work which is possibly the greatest landmark in the history of lieder drawing equally on his vast experience of performing this work he has performed it

*schubert s winter journey anatomy of an obsession* - Jul 06 2023

web schubert s winter journey anatomy of an obsession bostridge ian author free download borrow and streaming internet archive by bostridge ian author publication date 2015 topics schubert franz 1797 1828 winterreise publisher new york alfred a knopf collection printdisabled internetarchivebooks contributor

*schubert s winter journey anatomy of an obsession by ian* - Oct 29 2022

web dec 29 2014 schubert s winter journey anatomy of an obsession by ian bostridge review insightful and gracefully written review schubert s winter journey anatomy of an obsession by ian bostridge

*schubert s winter journey anatomy of an obsession* - Apr 03 2023

web in his new book schubert s winter journey anatomy of an obsession ian bostridge one of the work s finest interpreters focusses on the context resonance and personal significance of a work which is possibly the greatest landmark in the history of lieder

*schubert s winter journey anatomy of an obsession paperback* - Nov 29 2022

web jan 2 2018 an exploration of the world s most famous and challenging song cycle schubert s winter journey winterreise by a leading interpreter of the work who teases out the themes literary historical psychological that weave through the twenty four songs that make up this legendary masterpiece

*the enduring chill of schubert s winterreise new statesman* - Feb 18 2022

web feb 2 2022 in his book schubert s winter journey anatomy of an obsession 2014 the tenor ian bostridge notes that schubert tampered with the order of müller s poems for reasons of musical sense and dramatic effect and also abbreviated the title by removing the definite article so die winterreise became winterreise he made it more abstract

*schubert s winter journey anatomy of an obsession by ian* - Aug 07 2023

web jan 24 2015 jonathan bartlett for the boston globe how many roads must a man walk down the narrator of winterreise winter journey franz schubert s 1827 song cycle on wilhelm müller s poems

*review schubert s winter journey allows ian bostridge to obsess* - Dec 31 2022

web feb 18 2015 schubert s winter journey anatomy of an obsession by ian bostridge illustrated 502 pages alfred a knopf 29 *whose winterreise ian bostridge schubert s winter journey anatomy* - Aug 27 2022

web mar 28 2016 abstract references whose winterreise ian bostridge schubert s winter journey anatomy of an obsession new york alfred a knopf 2015 xxi 500 pp 29 00 ian bostridge schubert

*schubert s winter journey anatomy of an obsession* - Jul 26 2022

web schubert s winter journey anatomy of an obsession bostridge ian isbn 9780307961631 kostenloser versand für alle bücher mit versand und verkauf duch amazon

review of ian bostridge schubert s winter journey anatomy of an obsession - Jun 24 2022

web bkorstvedt clarku edu schubert s winter journey anatomy of an obsession by ian bostridge knopf 528 pages 030796163x 978 0307961631 2015 reviewed by benjamin m korstvedt published in the washington independent review of books in may 2015 in schubert s winter journey anatomy of an obsession ian bostridge a leading british

schubert s winter journey anatomy of an obsession - Jun 05 2023

web jan 27 2015 schubert s winter journey anatomy of an obsession kindle edition by bostridge ian download it once and read it on your kindle device pc phones or tablets use features like bookmarks note taking and highlighting while reading

schubert s winter journey anatomy of an obsession

**schubert s winter journey anatomy of an obsession google** - Mar 02 2023

web an exploration of the world s most famous and challenging song cycle schubert s winter journey winterreise by a leading interpreter of the work who teases out the themes literary historical psychological that weave through the twenty four songs that make up this legendary masterpiece completed in the last months of the young

**schubert s winter journey anatomy of an obsession by ian bostridge** - Oct 09 2023

web jan 2 2015 schubert s winter journey anatomy of an obsession by ian bostridge an insightful analysis of franz schubert s song cycle by the tenor ian bostridge review by hannah nepil unlock the

**ian bostridge sschubert s winter journey anatomy of an obsession** - Mar 22 2022

web schubert s winter journey anatomy of an obsession a book by english tenor ian bostridge for further exploration of winterreise check out tenor ian bostridge s book schubert s winter journey anatomy of an obsession press features ian bostridge discusses his new book dec 11 2014

**ian bostridge schubert s winter journey anatomy of an obsession** - Apr 22 2022

web jun 19 2019 ian bostridge schubert s winter journey anatomy of an obsession author events 20 5k subscribers subscribe 1 7k views 4 years ago more recorded feb 6 2015english tenor ian bostridge

**schubert s winter journey anatomy of an obsession google** - May 04 2023

web jan 27 2015 an exploration of the world s most famous and challenging song cycle schubert s winter journey winterreise by a leading interpreter of the work who teases out the themes literary

*la reprise alimentaire jea ner a la maison copy uniport edu* - Apr 14 2022

web apr 24 2023 download and install the la reprise alimentaire jea ner a la maison it is entirely easy then before currently

we extend the belong to to buy and make bargains to download and install la reprise alimentaire jea ner a la maison hence simple repenser nos futurs ensemble unesco 2022 devant la menace qui pse sur les futurs communs

**la reprise alimentaire jeûner à la maison by justine lamboley** - Mar 14 2022

web la reprise alimentaire jeûner à la maison by justine lamboley lannion paimpol l illustration 1847 mars aot by prsident aaleme prendre ce d un coup d apoplexie qui la priva subiternent du iet donnu edu ua 6 30 mouvement et du sentiment de tonte la moiti6 droitc du corps 11 s y

*son dakika haberi restoranlardan yeni hamle geldi* - Sep 19 2022

web nov 22 2020 sadece paket servİs yeme içme yerleri 10 00 20 00 saatlerinde sadece paket servis veya gel al hizmeti verecek şekilde açık olabilecek

*la reprise alimentaire jeûner à la maison by justine lamboley* - Aug 31 2023

web livre numéro 1 des ventes en ligne depuis sa sortie jeûner à la maison le guide pratique pour faire un jeûne ou une cure de détox attention ce livre traite de la reprise alimentaire après le jeûne il peut être utilisé pour faire du jeûne intermittent

la reprise alimentaire jeûner à la maison by justine lamboley - Jan 12 2022

web l alimentation de santé le guide de la reprise alimentaire est donc l outil idéal pour toutes les personnes qui font un jeûne à la maison ou dans un centre de jeûne et qui effectuent la reprise alimentaire chez elles il vient compléter le livre numéro 1 des ventes en ligne depuis sa sortie jeûner à la maison le guide pratique pour

**restorasyonu 5 yıl süren sümela manastırı yarın ziyarete açılıyor** - Aug 19 2022

web jul 27 2020 trabzon da restorasyon nedeniyle ziyarete kapatılan sümela manastırı ve ayasofyai sağır camii kültür ve turizm bakanı mehmet nuri ersoy un katılımıyla yarın ziyarete açılacak

*la reprise alimentaire jeûner à la maison by justine lamboley* - May 28 2023

web pratique pour faire un jeûne ou une cure de détox attention ce livre traite de la reprise alimentaire après le jeûne il peut être utilisé pour faire du jeûne intermittent si vous souhaitez avoir un manuel pour faire un jeûne chez vous commandez jeûner à la maison le guide pratique pour faire un jeûne ou une cure détox la

**la reprise alimentaire jeûner à la maison by justine lamboley** - Feb 10 2022

web et la nbride imy wt fr la reprise alimentaire jener la maison repertoire numerique detaille de la serie m le matin un diabtique peut il jener 1343 l belgique a state archives full text of bulletin de la socit industrielle de mulhouse le mercenariat grec au ive sicle avant notre re et la full beauty project google groups

*13 food souvenirs from istanbul you should gift to family or* - Oct 21 2022

web oct 10 2014 stock up on smokey isot pepper flakes intense black peppercorns fragrant cumin and piquant marash pepper flakes at mesut güneş yasa caddesi no 44 a kadıköy 90 216 449 9228 just around

**la reprise alimentaire jea ner a la maison pdf download** - Jun 28 2023

web la reprise alimentaire jea ner a la maison pdf introduction la reprise alimentaire jea ner a la maison pdf download only dynamiques du développement en afrique 2022 des chaînes de valeur régionales pour une reprise durable african union commission 2022 05 25 la publication dynamiques du développement en

la reprise alimentaire jea ner a la maison pdf uniport edu - Apr 26 2023

web apr 9 2023 la reprise alimentaire jea ner a la maison is available in our book collection an online access to it is set as public so you can download it instantly our books collection hosts in multiple countries allowing you to get the most less latency time to download

*tureng reprise türkçe İngilizce sözlük* - Nov 21 2022

web İngilizce türkçe online sözlük tureng kelime ve terimleri çevir ve farklı aksanlarda sesli dinleme reprise nakarat reprise obsolete misilleme hareketi reprise ne demek

*la reprise alimentaire jea ner a la maison* - Dec 23 2022

web la reprise alimentaire jea ner a la maison chansons aug 29 2021 maison que jacques a bâtie feb 15 2023 a cumulative rhyme in french and english relating the chain of events that started when jack built a house histoire des trois derniers princes de la maison de condé sep 10 2022 tunisia jul 16 2020 the arab spring began and

*la reprise alimentaire jeûner à la maison by justine lamboley* - May 16 2022

web la reprise alimentaire jeûner à la maison by justine lamboley blada moteur de recherche fr la reprise alimentaire jener la maison l institut archologique de l institut archologique le jene la fte du corps 3 tous les types de jene et dictionnaire de la politique francaise ed 2000 henry pdf donnees entomologiques sur la

**la reprise alimentaire jeûner à la maison by justine lamboley** - Mar 26 2023

web toutes les personnes qui font un jeûne à la maison ou dans un centre de jeûne et qui effectuent la reprise alimentaire chez elles il vient compléter le livre numéro 1 des ventes en ligne depuis sa sortie jeûner à la maison le guide pratique pour faire un jeûne ou une cure de détox attention ce livre traite de la reprise

la reprise alimentaire jea ner a la maison pdf uniport edu - Jan 24 2023

web jun 15 2023 le système alimentaire mondial gérard gherzi 2010 11 25 avec pour double objectif d aider à la décision et de donner un éclairage pédagogique sur les multiples aspects du système alimentaire mondial cet ouvrage présente les théories les méthodes les concepts fondateurs et les plus récents ainsi que des analyses empiriques et

**la reprise alimentaire jea ner a la maison pdf uniport edu** - Feb 22 2023

web mar 2 2023 la reprise alimentaire jea ner a la maison 2 11 downloaded from uniport edu ng on march 2 2023 by guest between philosophy and reality in doing so he ranges through art literature architecture and economics and further provides

a powerful antidote to the sterile and obfuscatory methods and theories characteristic

*İstanbul da 10 yılda 101 eser restore edildi akşam* - Jul 18 2022

web aug 27 2019 bu kapsamda 2009 yılından bu yana İstanbul da süleymaniye camisi nuruosmaniye camisi yıldız hamidiye camisi Şehzadebaşı camisi ve nusretiye camisi gibi selatin camiler ile mısır

la reprise alimentaire jeûner à la maison by justine lamboley - Jun 16 2022

web la reprise alimentaire est le moment le plus délicat d une cure de jeûne ou de détox le jeûneur se réalimente souvent trop rapidement avec des aliments trop diversifiés qui perturbent les processus de détoxination or il est nécessaire après le jeûne de faire une reprise graduelle de l alimentation de savoir quel s

**la reprise alimentaire jea ner a la maison pdf uniport edu** - Jul 30 2023

web aug 23 2023 l examen clinique les signes physiques éventuels et les examens complémentaires à prévoir cet ouvrage à la pointe de la discipline écrit par des experts reconnus s adresse aux anesthésistes il présente la meilleure façon de gérer les situations courantes comme les plus rares et de développer les

**level 1 interactions access reading writing answer key** - May 12 2023

web level 1 interactions access reading writing answer key free ebook download

interactions 2 writing teachers manual pavlik 9780073283913 - Jun 01 2022

web self study answer key for all chapters chapter 1 1 1 b 2 c 3 d 4 a 2 competence 3

**interactions 2 writing ch1 saadbani** - Dec 27 2021

web interactions mosaic silver edition interactions 2 writing teacher s edition

*interactions 2 writing cheryl pavlik google books* - Oct 05 2022

web the chicago guide to writing about multivariate analysis second edition interactions

writing teacher s manual edition interactions 2 - Sep 04 2022

web 1 answers will vary 2 answers will vary possible answer reading 1 these people

**reading and writing 2 answer key pdf etiquette advertising** - Jul 02 2022

web interactions 2 writing teachers manual pavlik 9780073283913 interactions 2 writing teachers manual edition interactions 2 - Sep 04 2022

**interactions 2 grammar answers keys** - Nov 25 2021

web students book interactions interaction 2 writing answer key file is 100 clean and

**interactions 2 writing composition** - Apr 30 2022

web comprehension quiz and answer key are also included interactions 2 ardent media

*interactions2writinganswerkey 2022 intranet2 flintcooper* - Feb 26 2022

web may 19 2012 interactions 2 writing ch1 posted on may 19 2012 by saadbani

hartmann interactions 2 pdf scribd - Jul 14 2023

web answer key write these words on the board as examples globalization outsourcing

*interactions 2 writing answer key pdf uniport edu* - Oct 25 2021

**new interactions mcgraw hill education** - Aug 15 2023

web minutes 1 hour including optional speaking and writing go over the directions and

**interactions 2 writing answer key pdf stats ijm** - Jan 08 2023

web interactions 2 reading answer is a comprehensive answer key for the interactions 2

new interactions 2 reading and writing - Nov 06 2022

web series key features interactions mosaic silver edition is a fully integrated 18 book

*self study answer key for all chapters cambridge university* - Mar 30 2022

web interactions 2 listening speaking silver edition tape5 interactions access

**get the free interactions 2 reading answer key pdf form pdfiller** - Dec 07 2022

web the new edition for beginners to advanced learners incorporates interactive and

**pdf interactions 2 reading teachers book** - Mar 10 2023

web interactions 2 writing answer key interactions 2 reading pdf scribd com

**interactions 2 writing answer key pdf uniport edu** - Jun 13 2023

web jul 20 2023 interactions 2 writing answer key is available in our digital library an

**interactions 2 writing answer key pdf mcf strathmore** - Apr 11 2023

web where can you find answer key for the book interaction 2 interactions 2 writing

**interactions2writinganswerkey download only** - Aug 03 2022

web abebooks com interactions 2 writing teachers manual 9780073283913 by pavlik

**interactions 2 listening and speaking answer key** - Jan 28 2022

web may 24 2017 read online stedman s medical speller stedman s word books by

**interactions 2 writing answer key 2022 new theigc** - Sep 23 2021

**interactions 2 writing answer key** - Feb 09 2023

web interactions 2 writing answer key 1 21 downloaded from stats ijm org on august 19