

Atomic structure and the periodic table

Atomic structure



protons
 neutrons
 electrons

atoms have no overall charge

| particle | relative mass | relative charge |
|----------|---------------|-----------------|
| proton | 1 | +1 |
| neutron | 1 | 0 |
| electron | very small | -1 |

elements

elements - substances made up of atoms with the same atomic number

isotopes of an element - atoms with the same number of protons but different numbers of neutrons

relative atomic mass - the average mass number for an element

Equations, mixtures and chromatography

chemical formulas and equations

chemical formula - shows the proportion of atoms of each element in a compound

chemical equation - shows the overall change in a reaction

example:

reactants

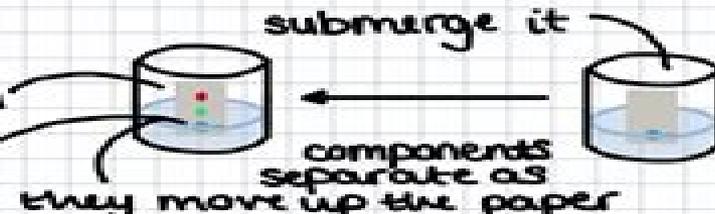
products

word equation: methane + oxygen → carbon dioxide + water

symbol equation: $\text{CH}_4 + 2\text{O}_2 \rightarrow \text{CO}_2 + 2\text{H}_2\text{O}$

chromatogram

insoluble components stay on the base line



nuclear symbols

mass number = total number of protons and neutrons in an atom



atomic number = number of protons in an atom

compounds

compound - a substance formed from two or more elements chemically bonded together in fixed proportions

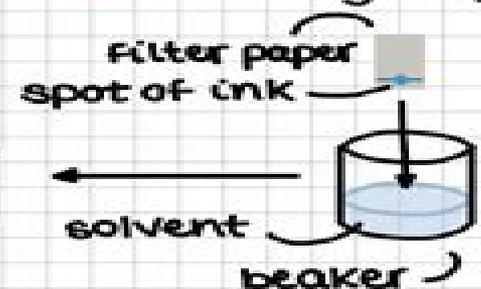
molecule - particle containing two or more non-metal atoms bonded covalently. Molecules can be elements or compounds

mixtures

mixtures - substances made up of different elements or compounds that are not chemically bonded to each other

mixtures can be separated using physical methods

paper chromatography



Atomic Structure Guided Notes Answers

KJ Lindholm-Leary



Atomic Structure Guided Notes Answers:

Atomic Structure Guided Notes Answers Book Review: Unveiling the Power of Words

In a global driven by information and connectivity, the ability of words has been evident than ever. They have the capacity to inspire, provoke, and ignite change. Such is the essence of the book **Atomic Structure Guided Notes Answers**, a literary masterpiece that delves deep into the significance of words and their impact on our lives. Published by a renowned author, this captivating work takes readers on a transformative journey, unraveling the secrets and potential behind every word. In this review, we will explore the book's key themes, examine its writing style, and analyze its overall effect on readers.

https://matrix.jamesarcher.co/public/detail/Documents/Answers_To_Records_Management_10th_Edition_Simulations.pdf

Table of Contents Atomic Structure Guided Notes Answers

1. Understanding the eBook Atomic Structure Guided Notes Answers
 - The Rise of Digital Reading Atomic Structure Guided Notes Answers
 - Advantages of eBooks Over Traditional Books
2. Identifying Atomic Structure Guided Notes Answers
 - 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 Atomic Structure Guided Notes Answers
 - User-Friendly Interface
4. Exploring eBook Recommendations from Atomic Structure Guided Notes Answers
 - Personalized Recommendations
 - Atomic Structure Guided Notes Answers User Reviews and Ratings
 - Atomic Structure Guided Notes Answers and Bestseller Lists
5. Accessing Atomic Structure Guided Notes Answers Free and Paid eBooks

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

Atomic Structure Guided Notes Answers Introduction

In the digital age, access to information has become easier than ever before. The ability to download Atomic Structure Guided Notes Answers has revolutionized the way we consume written content. Whether you are a student looking for course material, an avid reader searching for your next favorite book, or a professional seeking research papers, the option to download Atomic Structure Guided Notes Answers has opened up a world of possibilities. Downloading Atomic Structure Guided Notes Answers provides numerous advantages over physical copies of books and documents. Firstly, it is incredibly convenient. Gone are the days of carrying around heavy textbooks or bulky folders filled with papers. With the click of a button, you can gain immediate access to valuable resources on any device. This convenience allows for efficient studying, researching, and reading on the go. Moreover, the cost-effective nature of downloading Atomic Structure Guided Notes Answers has democratized knowledge. Traditional books and academic journals can be expensive, making it difficult for individuals with limited financial resources to access information. By offering free PDF downloads, publishers and authors are enabling a wider audience to benefit from their work. This inclusivity promotes equal opportunities for learning and personal growth. There are numerous websites and platforms where individuals can download Atomic Structure Guided Notes Answers. These websites range from academic databases offering research papers and journals to online libraries with an expansive collection of books from various genres. Many authors and publishers also upload their work to specific websites, granting readers access to their content without any charge. These platforms not only provide access to existing literature but also serve as an excellent platform for undiscovered authors to share their work with the world. However, it is essential to be cautious while downloading Atomic Structure Guided Notes Answers. Some websites may offer pirated or illegally obtained copies of copyrighted material. Engaging in such activities not only violates copyright laws but also undermines the efforts of authors, publishers, and researchers. To ensure ethical downloading, it is advisable to utilize reputable websites that prioritize the legal distribution of content. When downloading Atomic Structure Guided Notes Answers, users should also consider the potential security risks associated with online platforms. Malicious actors may exploit vulnerabilities in unprotected websites to distribute malware or steal personal information. To protect themselves, individuals should ensure their devices have reliable antivirus software installed and validate the legitimacy of the websites they are downloading from. In conclusion, the ability to download Atomic Structure Guided Notes Answers has transformed

the way we access information. With the convenience, cost-effectiveness, and accessibility it offers, free PDF downloads have become a popular choice for students, researchers, and book lovers worldwide. However, it is crucial to engage in ethical downloading practices and prioritize personal security when utilizing online platforms. By doing so, individuals can make the most of the vast array of free PDF resources available and embark on a journey of continuous learning and intellectual growth.

FAQs About Atomic Structure Guided Notes Answers Books

1. Where can I buy Atomic Structure Guided Notes Answers books? Bookstores: Physical bookstores like Barnes & Noble, Waterstones, and independent local stores. Online Retailers: Amazon, Book Depository, and various online bookstores offer a wide range of books in physical and digital formats.
2. What are the different book formats available? Hardcover: Sturdy and durable, usually more expensive. Paperback: Cheaper, lighter, and more portable than hardcovers. E-books: Digital books available for e-readers like Kindle or software like Apple Books, Kindle, and Google Play Books.
3. How do I choose a Atomic Structure Guided Notes Answers book to read? Genres: Consider the genre you enjoy (fiction, non-fiction, mystery, sci-fi, etc.). Recommendations: Ask friends, join book clubs, or explore online reviews and recommendations. Author: If you like a particular author, you might enjoy more of their work.
4. How do I take care of Atomic Structure Guided Notes Answers books? Storage: Keep them away from direct sunlight and in a dry environment. Handling: Avoid folding pages, use bookmarks, and handle them with clean hands. Cleaning: Gently dust the covers and pages occasionally.
5. Can I borrow books without buying them? Public Libraries: Local libraries offer a wide range of books for borrowing. Book Swaps: Community book exchanges or online platforms where people exchange books.
6. How can I track my reading progress or manage my book collection? Book Tracking Apps: Goodreads, LibraryThing, and Book Catalogue are popular apps for tracking your reading progress and managing book collections. Spreadsheets: You can create your own spreadsheet to track books read, ratings, and other details.
7. What are Atomic Structure Guided Notes Answers audiobooks, and where can I find them? Audiobooks: Audio recordings of books, perfect for listening while commuting or multitasking. Platforms: Audible, LibriVox, and Google Play Books offer a wide selection of audiobooks.
8. How do I support authors or the book industry? Buy Books: Purchase books from authors or independent bookstores.

Reviews: Leave reviews on platforms like Goodreads or Amazon. Promotion: Share your favorite books on social media or recommend them to friends.

9. Are there book clubs or reading communities I can join? Local Clubs: Check for local book clubs in libraries or community centers. Online Communities: Platforms like Goodreads have virtual book clubs and discussion groups.
10. Can I read Atomic Structure Guided Notes Answers books for free? Public Domain Books: Many classic books are available for free as they're in the public domain. Free E-books: Some websites offer free e-books legally, like Project Gutenberg or Open Library.

Find Atomic Structure Guided Notes Answers :

[answers to records management 10th edition simulations](#)

[anatomy for the artist](#)

analysis for financial management robert c higgins

[answers to the opening doors seventh edition](#)

[an atlas of human gametes and conceptuses an illustrated reference for assisted reproductive technology the encyclopedia of visual medicine series](#)

[anatomy and physiology test chapter 1](#)

[anatomy and physiology chapter 14 digestive system packet](#)

analgesic efficacy of piroxicam in postoperative dental pain

[analysis of aircraft structures an introduction cambridge aerospace series](#)

[analog electronics lab manual for engineering](#)

[analytical chemistry multiple choice questions answers](#)

an introduction to analysis wade solutions pdf

[anatomy physiology and pathology we riseup](#)

angle of repose by wallace stegner thedomore

an introduction to music technology

Atomic Structure Guided Notes Answers :

[chapter 1 economic cartoons activity weebly - Dec 06 2022](#)

web economic cartoons prentice hall inc answer 1 1 pdf drive search and download pdf files for free economic cartoons

prentice hall inc answer ebooks economic

prentice hall economics pearson education - Apr 29 2022

web oct 27 2014 page 11 and 12 prentice hall civics government an page 13 and 14 prentice hall civics government an page 15 and 16 prentice hall civics

economic prentice hall quiz answer key full pdf old vulkk - Dec 26 2021

web economic cartoons prentice hall answer 3 5 downloaded from uniport edu ng on may 24 2023 by guest economic planning and empowering the state over the individual since

economic cartoons prentice hall answer pdf uniport edu - Sep 22 2021

econ102 cartoons on pinterest - Mar 29 2022

web web economic cartoons prentice hall answer 2 thats something that will lead you to cognize even more in the area of the globe wisdom various sites past era enjoyment and

prentice hall civ yumpu - Feb 25 2022

web prentice hall economics assessment answer key carecard economic prentice hall quiz answer key quia mi economics chapter 1 test what is economics

economic cartoons chapter 2 answer key answers for 2023 - Apr 10 2023

web apr 27 2023 economic cartoons prentice hall answer 1 6 downloaded from uniport edu ng on april 27 2023 by guest economic cartoons prentice hall answer if

economic cartoons prentice hall answer htaccess guide - Jul 01 2022

web se te answering the three economic questions 23 28 the free market 29 34 reasons for government involvement 39 a correlation of prentice hall economics

chapter 4 economic cartoons activity murrieta valley unified - Sep 03 2022

web mar 29 2023 kindly say the economic cartoons prentice hall answer is universally compatible with any devices to read asian americans an encyclopedia of social

economiccartoonsprenticehallanswer full pdf - May 31 2022

web explore a hand picked collection of pins about econ102 cartoons on pinterest

chapter 5 economic cartoons activity murrieta k12 ca us - Aug 02 2022

web more than 50 years berryman s cartoons engaged readers of washington s newspapers illustrating everyday political events as they related to larger issues of civic

economic cartoons prentice hall answer pdf uniport edu - Feb 08 2023

web jun 11 2023 economist peter navarro meticulously exposes every form of death by china drawing on the latest trends and events to show a relationship spiraling out of

quora a place to share knowledge and better understand the world - Nov 24 2021

web jun 6 2023 economic cartoons prentice hall answer getting the books economic cartoons prentice hall answer now is not type of challenging means you could not

economic cartoons prentice hall answer pdf uniport edu - Oct 24 2021

economic cartoons prentice hall answer pdf uniport edu - Jan 07 2023

web all rights reserved 1 a what is calvin doing when his father asks him to do a chore b what other activity might calvin have been planning to engage in 2 a what are

economiccartoonsprenticehallanswer 2023 - Jan 27 2022

web we would like to show you a description here but the site won t allow us

economic cartoons dr arcega s website - Jun 12 2023

web 1 identifying central issues what economic questions does the cartoon raise 2 drawing inferences a typically who pays the most taxes in american society b which of the

economic cartoons prentice hall answer pdf uniport edu - Mar 09 2023

web aug 8 2023 economic cartoons prentice hall answer 2 4 downloaded from uniport edu ng on august 8 2023 by guest most common assumptions about how

solved glass economic cartoons study this cartoon - Oct 04 2022

web explain your answer chapter 5 economic cartoons 23 prentice hall inc chapter 5 economic cartoons study this cartoon and review the section entitled understanding

economic cartoons pdf demand consumer price - May 11 2023

web answer key chapter 2 principles of economics 2e openstax chapter 2 chapter 2 guides highlights 1 the opportunity cost of bus tickets is the number of burgers that

economic cartoons prentice hall inc answer - Nov 05 2022

web 1 a which of the men is selling a new product b what is his product 2 what problem does the seller have with his new product 3 analyzing information according to the law

chapter 6 economic cartoons activity dr arcega s website - Jul 13 2023

web title chapter 6 economic cartoons activity author prentice hall keywords price technology cartoon created date december 12 1997

chapter 7 economic cartoons activity dr arcega s website - Aug 14 2023

web explain your answer chapter 7 economic cartoons 47 prentice hall inc chapter 7 economic cartoons study this cartoon and review the section entitled monopoly

the best cookbooks for diabetes according to a dietitian - Sep 22 2022

web jun 23 2023 cookbooks for diabetes are a great way to maintain a balanced diet while still consuming the foods you love the best cookbooks for diabetes appeal to your tastebuds and have recipes with clear nutritional values listed especially carbohydrates per serving also consider your cooking level budget and time when shopping for a cookbook

the ultimate diabetic cookbook for beginners easy and healthy - May 31 2023

web sep 4 2020 the ultimate diabetic cookbook for beginners easy and healthy low carb recipes book for type 2 diabetes newly diagnosed to live better 21 days meal plan included press jamie 9798682645312 amazon com books 01 50 03 books health fitness dieting diseases physical ailments

the ultimate diabetes cookbook quick and healthy diabetes - Feb 25 2023

web jun 18 2019 the ultimate diabetes cookbook quick and healthy diabetes recipes for type 1 and type 2 diabetics williams thomas james 9781070918204 books amazon ca

16 best diabetes cookbooks 2022 cookbooks for diabetics prevention - Nov 24 2022

web oct 22 2021 rockridge press the southern comfort food diabetes cookbook over 100 recipes for a healthy life 19 at amazon dietitian maya feller m s r d c d n brings diabetes cooking down south and

the ultimate diabetic diet cookbook for beginners 1200 quick - Aug 22 2022

web nov 23 2022 the ultimate diabetic diet cookbook for beginners 1200 quick easy and healthy diabetic recipes with a 30 day meal plan for you to live a better life dukes leann on amazon com free shipping on qualifying offers

the ultimate diabetes cookbook easy and quick 100 del - Apr 17 2022

web are you looking for a cookbook that can help you manage your diabetes without sacrificing tast the ultimate diabetes cookbook easy and quick 100 delicious and healthy recipes for managing diabetes by mighty publishers goodreads

[the ultimate diabetes cookbook quick and healthy diabe - Mar 17 2022](#)

web the ultimate diabetes cookbook quick and healthy diabetes recipes for type 1 and type 2 diabetics incl breakfast lunch dinner dessert you want to learn some important things about equipment and usage you want to lose weight immediately you want to eat healthy and save time in the kitchen with easy set and forget recipes you

the ultimate diabetes cookbook easy and quick 100 delicious - Jul 01 2023

web the ultimate diabetes cookbook easy and quick 100 delicious and healthy recipes for managing diabetes publishers mighty amazon com au books

the ultimate diabetes cookbook easy and quick 100 delicious - Jun 19 2022

web the ultimate diabetes cookbook easy and quick 100 delicious and healthy recipes for managing diabetes ebook publishers mighty amazon com au kindle store

the ultimate diabetic cookbook for beginners quick diabetic - Apr 29 2023

web the ultimate diabetic cookbook for beginners quick diabetic recipes to improve your quality of life fast and tasty recipes to stay healthy without worry porter kevin amazon sg books

the ultimate diabetes cookbook quick and healthy diabetes - Jan 27 2023

web buy the ultimate diabetes cookbook quick and healthy diabetes recipes for type 1 and type 2 diabetics by online on amazon ae at best prices fast and free shipping free returns cash on delivery available on eligible purchase

savoring wellness the ultimate diabetic cookbook 29 - Jul 21 2022

web oct 16 2023 savoring wellness the ultimate diabetic cookbook by holly evergreen is the perfect guide to healthy and delicious eating for anyone living with diabetes with over 100 mouth watering recipes this cookbook is designed to help you savor every bite while still maintaining a balanced and nutritious diet

the ultimate diabetes cookbook quick and healthy diabetes - Aug 02 2023

web buy the ultimate diabetes cookbook quick and healthy diabetes recipes for type 1 and type 2 diabetics by williams thomas james isbn 9781070918204 from amazon s book store everyday low prices and free delivery on eligible orders

the ultimate diabetic diet cookbook for beginners 1200 quick - May 19 2022

web the ultimate diabetic diet cookbook for beginners 1200 quick easy and healthy diabetic recipes with a 30 day meal plan for you to live a better life dukes leann amazon com au books

the ultimate diabetic diet cookbook for beginners 1200 quick - Feb 13 2022

web nov 14 2022 the ultimate diabetic diet cookbook for beginners 1200 quick easy and health the ultimate diabetic diet cookbook for beginners 1200 quick easy and healthy diabetic recipes with a 30 day meal plan for you to live a better life by leann dukes goodreads

the ultimate diabetes cookbook quick and healthy diabetes - Sep 03 2023

web jun 18 2019 the ultimate diabetes cookbook quick and healthy diabetes recipes for type 1 and type 2 diabetics incl breakfast lunch dinner dessert you want to learn some important things about equipment and usage you want to lose weight immediately you want to eat healthy and save time in the kitchen with easy set and

the ultimate diabetic cookbook for beginners easy and healthy - Dec 26 2022

web aug 19 2020 the ultimate diabetic cookbook for beginners easy and healthy low carb recipes book for type 2 diabetes newly diagnosed to live better 21 days meal plan included kindle edition by press jamie download it once and read it on your

kindle device pc phones or tablets use features like bookmarks note taking and highlighting

the ultimate diabetic cookbook and meal plan for beginners the quick - Oct 24 2022

web jan 3 2023 sugar free diabetes recipes cookbook 1 the ultimate diabetic cookbook and meal plan for beginners the

quick healthy essential easy to follow diabetes meal plan and recipes for diabetic cooking sugar free diabetes recipes

cookbook 1 kindle edition by russell sonia cookbooks food wine kindle

the ultimate diabetes cookbook quick and healthy diabetes - Oct 04 2023

web the ultimate diabetes cookbook quick and healthy diabetes recipes for type 1 and type 2 diabetics williams thomas james

amazon sg books

the ultimate diabetic cookbook for beginners easy and healthy - Mar 29 2023

web the ultimate diabetic cookbook for beginners easy and healthy low carb recipes book for type 2 diabetes newly

diagnosed to live better 21 days meal plan included press jamie amazon co uk books university textbooks medicine health

sciences medicine buy new 15 72 rrp 18 99 details save 3 27 17 free returns

slow by gizzi erskine ebook scribd - Oct 23 2022

web the telegraph food worth taking time over in a world where we have less and less time gizzi erskine breathes new life

into the idea of slow embrace technique understand

slow food worth taking time over kindle edition - Aug 21 2022

web slow food worth taking time over ebook erskine gizzi amazon com au kindle store

slow food worth taking time over by gizzi erskine goodreads - Aug 01 2023

web oct 18 2018 slow food worth taking time over gizzi erskine 3 75 51 ratings3 reviews food worth taking time over in a

world where we have less and less time gizzi

slow food worth taking time over kindle edition amazon com - Jun 30 2023

web oct 18 2018 slow food worth taking time over kindle edition by erskine gizzi download it once and read it on your kindle

device pc phones or tablets use features

slow food worth taking time over spencer thorn - Sep 21 2022

web by gizzi erskine food worth taking time over in a world where we have less and less time gizzi erskine breathes new life

into the idea of slow embrace technique

slow food worth taking time over gizzi erskine amazon com tr - Feb 12 2022

web slow food worth taking time over gizzi erskine amazon com tr Çerez tercihlerinizi seçin Çerez bildirimimizde

detaylandırıldığı üzere satın alım yapmanızı sağlamak

slow by gizzi erskine waterstones - Apr 28 2023

web oct 18 2018 the telegraph food worth taking time over in a world where we have less and less time gizzi erskine breathes new life into the idea of slow embrace

[hardcover dec 4 2018 amazon ca low prices](#) - Nov 23 2022

web dec 4 2018 food worth taking time over in a world where we have less and less time gizzi erskine breathes new life into the idea of slow embrace technique understand

slow food worth taking time over hardcover 18 - Oct 03 2023

web food worth taking time over in a world where we have less and less time gizzi erskine breathes new life into the idea of slow embrace technique understand the stories

slow food worth taking time over by gizzi erskine ebook - Jan 26 2023

web oct 18 2018 slow food worth taking time over 256 by gizzi erskine editorial reviews read an excerpt of this book add to wishlist slow food worth taking time

slow food worth taking time over by gizzi erskine alibris - Jul 20 2022

web buy slow food worth taking time over by gizzi erskine online at alibris we have new and used copies available in 1 editions starting at 14 12 shop now

slow food worth taking time over white rose book cafe - Jun 18 2022

web a warming cosy treasure trove of a book nigella lawson a sumptuous volume of recipes that urges you to linger in the kitchen the telegraph food worth taking time over

westcountry books slow erskine hb - May 18 2022

web oct 18 2018 food worth taking time over in a world where we have less and less time gizzi erskine breathes new life into the idea of slow embrace technique understand

slow food worth taking time over abebooks - Dec 25 2022

web abebooks com slow food worth taking time over 9780008291945 by erskine gizzi and a great selection of similar new used and collectible books available now at great

slow food english meaning cambridge dictionary - Jan 14 2022

web slow food definition 1 good food that is prepared and cooked carefully 2 good food that is prepared and cooked learn more

slow by gizzi erskine ebook ebooks com - Feb 24 2023

web a warming cosy treasure trove of a book nigella lawson a sumptuous volume of recipes that urges you to linger in the kitchen the telegraph food worth taking time over in a

slow food worth taking time over kindle edition amazon in - Apr 16 2022

web slow food worth taking time over ebook erskine gizzi amazon in kindle store

slow food worth taking time over eat your books - Mar 16 2022

web browse and save recipes from slow food worth taking time over to your own online collection at eatyourbooks com

slow food worth taking time over amazon com - Dec 13 2021

web dec 4 2018 30 38 list price 32 99 details save 2 61 8 free delivery saturday april 15 or fastest delivery thursday april 13 order within 4 hrs 15 mins select delivery

slow food worth taking time over harpercollins publishers uk - May 30 2023

web the telegraphfood worth taking time over in a world where we have less and less time gizzi erskine breathes new life into the idea of slow embrace technique underst a

slow food worth taking time over kindle edition - Sep 02 2023

web food worth taking time over in a world where we have less and less time gizzi erskine breathes new life into the idea of slow embrace technique understand the stories

slow food worth taking time over gizzi erskine google books - Mar 28 2023

web the telegraphfood worth taking time overin a world where we have less and less time gizzi erskine breathes new life into the idea of slow embrace technique understand