

5 STAGES

OF READING DEVELOPMENT



www.educatorstechnology.com



EMERGENT PRE-READING (AGES 0-5)

1

- Print awareness
- Oral language development
- Phonemic awareness
- Letter recognition
- Early writing

EARLY READING (AGES 5-7)



2

- Phonics
- Sight words
- Reading comprehension
- Reading fluency
- Vocabulary development
- Early writing



TRANSITIONAL READING (AGES 7-9)

3

- Reading fluency
- Comprehension strategies
- Expanding vocabulary
- Varied text genres
- Reading for different purposes
- Writing development

INTERMEDIATE READING (AGES 9-12)



- Reading comprehension
- Critical thinking
- Text analysis
- Diverse reading materials
- Reading stamina
- Writing skills

4

ADVANCED READING (AGES 12+)

- Deep comprehension
- Critical analysis
- Synthesis and evaluation
- Advanced vocabulary
- Reading for various purposes
- Advanced writing skills

5



Reading Freedom 2 Developmental

CH Cherryholmes



Reading Freedom 2 Developmental:

Thank you definitely much for downloading **Reading Freedom 2 Developmental**. Maybe you have knowledge that, people have seen numerous times for their favorite books gone this Reading Freedom 2 Developmental, but end happening in harmful downloads.

Rather than enjoying a fine ebook past a mug of coffee in the afternoon, instead they juggled in the manner of some harmful virus inside their computer. **Reading Freedom 2 Developmental** is available in our digital library an online entrance to it is set as public suitably you can download it instantly. Our digital library saves in complex countries, allowing you to acquire the most less latency times to download any of our books bearing in mind this one. Merely said, the Reading Freedom 2 Developmental is universally compatible once any devices to read.

https://pinsupreme.com/book/detail/fetch.php/Masonry_Beyond_The_Light.pdf

Table of Contents Reading Freedom 2 Developmental

1. Understanding the eBook Reading Freedom 2 Developmental
 - The Rise of Digital Reading Reading Freedom 2 Developmental
 - Advantages of eBooks Over Traditional Books
2. Identifying Reading Freedom 2 Developmental
 - 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 Reading Freedom 2 Developmental
 - User-Friendly Interface
4. Exploring eBook Recommendations from Reading Freedom 2 Developmental
 - Personalized Recommendations
 - Reading Freedom 2 Developmental User Reviews and Ratings

- Reading Freedom 2 Developmental and Bestseller Lists
- 5. Accessing Reading Freedom 2 Developmental Free and Paid eBooks
 - Reading Freedom 2 Developmental Public Domain eBooks
 - Reading Freedom 2 Developmental eBook Subscription Services
 - Reading Freedom 2 Developmental Budget-Friendly Options
- 6. Navigating Reading Freedom 2 Developmental eBook Formats
 - ePub, PDF, MOBI, and More
 - Reading Freedom 2 Developmental Compatibility with Devices
 - Reading Freedom 2 Developmental Enhanced eBook Features
- 7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Reading Freedom 2 Developmental
 - Highlighting and Note-Taking Reading Freedom 2 Developmental
 - Interactive Elements Reading Freedom 2 Developmental
- 8. Staying Engaged with Reading Freedom 2 Developmental
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Reading Freedom 2 Developmental
- 9. Balancing eBooks and Physical Books Reading Freedom 2 Developmental
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Reading Freedom 2 Developmental
- 10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
- 11. Cultivating a Reading Routine Reading Freedom 2 Developmental
 - Setting Reading Goals Reading Freedom 2 Developmental
 - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Reading Freedom 2 Developmental
 - Fact-Checking eBook Content of Reading Freedom 2 Developmental
 - 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

Reading Freedom 2 Developmental Introduction

In today's digital age, the availability of Reading Freedom 2 Developmental 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 Reading Freedom 2 Developmental books and manuals for download, along with some popular platforms that offer these resources. One of the significant advantages of Reading Freedom 2 Developmental 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 Reading Freedom 2 Developmental 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, Reading Freedom 2 Developmental 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 Reading Freedom 2 Developmental 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 Reading Freedom 2 Developmental 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, Reading Freedom 2 Developmental 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 Reading Freedom 2 Developmental books and manuals for download and embark on your journey of knowledge?

FAQs About Reading Freedom 2 Developmental Books

1. Where can I buy Reading Freedom 2 Developmental 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 Reading Freedom 2 Developmental 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 Reading Freedom 2 Developmental 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 Reading Freedom 2 Developmental 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 Reading Freedom 2 Developmental 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 Reading Freedom 2 Developmental :

masonry beyond the light

~~mastering basics~~i john

mass appeal

master the clep 2005

master the catholic high school entrance exam 2005

mary barton

masonic antiquities of the orient unveiled 1894

masonic allegories sun worship and the zodiac

~~mary shelley teas 128 twaynes english authors series~~

master of disaster

masada herods fortress and the zealots 1

masonic harp a collection of masonic odes hymns and songs 1858

mass media and social problems international series in experimental social psychology v. 2

mary shelleys fictions from frankenstein to falkner

massachusetts travel vision pocket map

Reading Freedom 2 Developmental :

r pour la statistique et la science des donna c e pdf - May 24 2022

web r pour la statistique et la science des donna c e 3 3 sources variées leur traitement et leur organisation avec des structures de données adéquates plus encore la

r pour la statistique et la science des données amazon fr - Jul 06 2023

web r pour la statistique et la science des donna c e bulletin bibliographique institut national de la statistique et des études économiques service de coopération jul 18

r pour la statistique et la science des donnees cultura - Feb 01 2023

web jul 30 2023 vaste public d étudiants de master de physique et de chimie et d élèves des écoles d ingénieurs il intéressera également les chercheurs dans des domaines

r pour la statistique et la science des donna c e - Mar 22 2022

web aug 10 2023 r pour la statistique et la science des donna c e 1 12 downloaded from uniport edu ng on august 10 2023 by guest r pour la statistique et la science des

introduction r pour la statistique et la science des données - Sep 08 2023

web r pour la statistique et la science des donna c e 1 r pour la statistique et la science des donna c e exploration de données et méthodes statistiques initiation à la

r pour la statistique et la science des donna c e dotnbnm - Oct 29 2022

web to get the most less latency epoch to download any of our books with this one merely said the r pour la statistique et la science des donna c e is universally compatible as

qu est ce qu un bon graphique statistique elsevier - Sep 27 2022

web initiation à la statistique avec r statistiques en sciences humaines avec r 2e édition comprendre et réaliser les tests statistiques avec r le logiciel r modélisation

r pour la statistique et la science des donna c e - Dec 31 2022

web r pour la statistique et la science des donna c e statistiques en sciences humaines avec r 2e édition le langage r au quotidien analyse statistique des risques agro

r pour la statistique et la science des donna c e pdf - Nov 29 2022

web aug 11 2023 un graphique statistique est une figure fondée sur des données recueillies sur des populations ou des échantillons un bon graphique doit montrer de la variation

r pour la statistique et la science des donna c e wrbb neu - Apr 22 2022

web r pour la statistique et la science des donna c e recognizing the pretentiousness ways to acquire this book r pour la statistique et la science des donna c e is

r pour la statistique et la science des donna c e pdf - Jul 26 2022

web may 7 2023 we find the money for r pour la statistique et la science des donna c e and numerous book collections from fictions to scientific research in any way

r pour la statistique et la science des données le - Oct 09 2023

web le livre se divise en effet en deux grandes parties la première est centrée sur le logiciel lui même la seconde sur la mise en œuvre de méthodes statistiques classiques avec

r pour la statistique et la science des donna c e copy - Oct 17 2021

r pour la statistique et la science des donna c e 2022 - Aug 07 2023

web fidélisez vos clients amazon business paiement 30 jours hors tva pour les professionnels noté 5 achetez r pour la statistique et la science des données de

r pour la statistique et la science des donna c e pdf - Jan 20 2022

web jun 27 2023 le but n est pas de traiter les aspects plutôt théoriques de la statistique mais de procurer une introduction méthodologique exempte de recettes de résultats

r pour la statistique et la science des donna c e pdf - Jun 24 2022

web 2 r pour la statistique et la science des donna c e 2022 09 27 toutes les sorties logicielles ont été reprises car le logiciel a été amélioré même si les sorties

r pour la statistique et la science des donna c e pdf - Jun 05 2023

web r pour la statistique et la science des donna c e science and the human comedy nov 02 2021 new scientific theories methods and objectives exert subtle and often

sommaire r pour la statistique et la science des données - Mar 02 2023

web r pour la statistique et la science des donna c e la science des comptes mise à la portée de tous oct 31 2022 l intelligence démographique jul 16 2021 pourquoi la

r pour la statistique et la science des donna c e - Feb 18 2022

web r pour la statistique et la science des donna c e programmation et analyse statistique avec r r pour la statistique et la science des données statistique

r pour la statistique et la science des donna c e copy - Dec 19 2021

web jul 14 2023 les filières où les statistiques sont utilisées sciences de la vie et de la terre études de santé sciences économiques géographie sciences physiques cet

r pour la statistique et la science des donna c e book - May 04 2023

web 8 classificationnonsupervisée243 8 1 classificationascendantehiérarchique 244 8 2 méthodesdesk means

r pour la statistique et la science des donna c e copy - Nov 17 2021

r pour la statistique et la science des données - Apr 03 2023

web r pour la statistique et la science des donnees par françois husson aux éditions pu de rennes tout le catalogue livre ebook et liseuses fournitures scolaires beaux arts

r pour la statistique et la science des donna c e book - Aug 27 2022

web may 27 2023 r pour la statistique et la science des donna c e 2 8 downloaded from uniport edu ng on may 27 2023 by guest statistique fréquemment utilisé en sciences

magic the gathering official encyclopedia volume 6 the - Dec 07 2022

web nov 7 2001 with a how to use guide collector s history and a visual guide incorporating the latest releases volume 6 of the popular card game will also feature an in depth look at the newest set of magic cards full card listings for decks and sideboards and fully updated deckbuilders indexes

magic the gathering official encyclopedia volume 5 the - May 12 2023

web nov 14 2000 magic the gathering official encyclopedia volume 5 the complete card guide paperback november 14 2000 by cory j herndon author 4 4 4 out of 5 stars 14 ratings

magic the gathering official encyclopedia volume 1 the - Oct 05 2022

web details select delivery location used acceptable details sold by thriftbooks atlanta us add to cart have one to sell sell on amazon see this image magic the gathering official encyclopedia volume 1 the complete card guide paperback nov 14 1996 by kathryn hayes author mark rosewater author beth moursund author 52 ratings

magic the gathering official encyclopedia volume 1 the - Aug 15 2023

web nov 14 1996 volume 1 of the official encyclopedia features more than 2 000 cards from antiquities to legends including discontinued cards promotional cards and misprints the history and significance of each expansion complement each set print length 224 pages

magic the gathering official encyclopedia volume 1 the - Feb 09 2023

web oct 20 1999 volume 1 of the official encyclopedia features more than 2 000 cards from antiquities to legends including discontinued cards promotional cards and misprints the history and significance of each expansion complement each set

magic the gathering official encyclopedia volume 5 - Mar 30 2022

web oct 14 2000 in association with wizards of the coast the creators of magic the gathering and the magi magic the gathering official encyclopedia volume 5 the complete card guide by cory j herndon goodreads

magic the gathering official encyclopedia volume 4 - Jun 13 2023

web nov 11 1999 magic the gathering official encyclopedia volume 4 cards bargain price november 11 1999 by beth moursund author richard garfield foreword 4 4 4 4 out of 5 stars 21 ratings

magic the gathering official encyclopedia the official card - Dec 27 2021

web oct 22 1999 with full color reproductions of over 1 700 new magic cards it includes the full urza s saga and its two expansions the new basic set sixth edition and wizards of the coast s broken expansion unglued are also featured

magic the gathering official encyclopedia mtg wiki - Jul 14 2023

web the magic the gathering official encyclopedia is a series of seven books published by thunder s mouth press between 1996 and 2002 there were 6 volumes in the series plus a complete encyclopedia which encompassed most of the material from those volumes each book featured pages of card images

magic the gathering official encyclopedia volume 4 the - Jan 28 2022

web beth moursund is a columnist for the duelist magazine circulation 200 000 the official publication of magic the gathering richard garfield is the creator of the magic phenomenon both live in seattle

magic the gathering official encyclopedia volume 6 magic - Apr 30 2022

web magic the gathering official encyclopedia volume 6 magic the online marketplace where any private and shop can buy and sell magic the gathering mtg yu gi oh and pokémon tcg trading cards cardtrader

magic the gathering official encyclopedia volume 3 - Mar 10 2023

web buy and sell the magic the gathering official encyclopedia volume 3 in europe s largest online marketplace for magic the gathering easy secure best prices

magic the gathering official encyclopedia volume 4 - Feb 26 2022

web dec 1 1999 with full color reproductions of over 1 700 new magic cards it includes the full urza s saga and its two expansions the new basic set sixth edition and wizards of the coast s broken expansion unglued are also featured

magic the gathering official encyclopedia volume 1 - Jul 02 2022

web oct 20 1999 running press oct 20 1999 games activities 224 pages volume 1 of the official encyclopedia features more

than 2 000 cards from antiquities to legends including discontinued cards

magic the gathering official encyclopedia volume 1 - Sep 04 2022

web nov 1 1996 3 66 47 ratings1 review volume 1 of the official encyclopedia features more than 2 000 cards from antiquities to legends including discontinued cards promotional cards and misprints the history and significance of each expansion complement each set genres reference

magic the gathering official encyclopedia volume 2 the - Jan 08 2023

web aug 12 1997 magic the gathering official encyclopedia volume 2 the complete card guide paperback august 12 1997 by the duelist magazine author richard garfield foreword 25 ratings see all formats and editions

magic the gathering official encyclopedia volume 3 the - Jun 01 2022

web sep 17 1998 beautiful full color reproductions of over 1 000 new magic cards fill the pages of this comprehensive reference guide to the decade s hottest fantasy game reading age 9 12 years print length 128 pages language english grade level 4 6 dimensions 8 5 x 0 5 x 11 25 inches publisher thunder s mouth press publication date

magic the gathering official encyclopedia volume 1 the - Nov 06 2022

web volume 1 of the official encyclopedia features more than 2 000 cards from antiquities to legends including discontinued cards promotional cards and misprints the history and significance of each expansion complement each set seitenzahl der print ausgabe 224 seiten sprache englisch herausgeber running press erscheinungstermin 14 november

mtg magic the gathering official encyclopedia volume - Apr 11 2023

web buy and sell the magic the gathering official encyclopedia volume 1 version 1 in europe s largest online marketplace for magic the gathering easy secure best prices

mtg magic the gathering official encyclopedia volume 4 - Aug 03 2022

web buy and sell the magic the gathering official encyclopedia volume 4 in europe s largest online marketplace for magic the gathering easy secure best prices

general certificate of secondary education unit a501 02 - Oct 03 2022

web a501 02 mark scheme november 2013 2 subject specific marking instructions 1 m marks are for using a correct method and are not lost for purely numerical errors a

gcse maths 9 1 j560 ocr - Aug 13 2023

web mark scheme unit a502 02 mathematics b higher tier june a502 02 pdf 351kb mark scheme unit a503 01 mathematics c foundation tier june a503 01 pdf

ocr gcse maths past papers revision maths - Oct 15 2023

web you can download the ocr gcse maths past papers and marking schemes by clicking on the links below ocr maths gcse 9

1 june 2022 mathematics j560 ocr maths

mark scheme for march 2013 ocr - Jul 12 2023

web mark scheme for gcse mathematics b linear general certificate of secondary education componentj567 03 mathematics paper 3 higher march 2013 ocr

general certificate of secondary education unit a502 02 ocr - Mar 08 2023

web unit a502 02 mathematics b higher tier mark scheme for november 2013 oxford cambridge and rsa examinations ocr oxford cambridge and rsa is a leading uk

general certificate of secondary education unit a501 02 ocr - May 10 2023

web unit a501 02 mathematics a higher tier mark scheme for january 2013 oxford cambridge and rsa examinations ocr oxford cambridge and rsa is a leading uk

general certificate of secondary education component j567 02 - Feb 07 2023

web this mark scheme is published as an aid to teachers and students to indicate the requirements of the examination it shows the basis on which marks were awarded by

download solutions ocr maths february 2013 higher mark scheme - Apr 28 2022

web handbook of high frequency trading jul 03 2021 this comprehensive examination of high frequency trading looks beyond mathematical models which are the subject of

ocr maths february 2013 higher mark scheme - Apr 09 2023

web ocr maths february 2013 higher mark scheme if you want to hilarious novels lots of stories legend comedy and more fictions collections are also commenced from best

mark scheme for march 2013 pmt - Jan 26 2022

web j567 02 mark scheme march 2013 4 subject specific marking instructions 1 m marks are for using a correct method and are not lost for purely numerical errors a marks are

ocr maths february 2013 higher mark scheme pdf kelliemay - Mar 28 2022

web dec 18 2022 ocr maths february 2013 higher mark scheme 2 11 downloaded from kelliemay com on december 18 2022 by guest content of the 2017 specification into

ocr maths february 2013 higher mark scheme pdf - Feb 24 2022

web enter the realm of ocr maths february 2013 higher mark scheme a mesmerizing literary masterpiece penned with a distinguished author guiding readers on a profound

ocr maths february 2013 higher mark scheme pdf - Nov 04 2022

web gcse mathematics for ocr foundation student book 2012 gcse english results reforming juvenile justice the civil rights

road to deeper learning ocr maths

mark scheme for november 2013 ocr - Jun 30 2022

web ocr 2013 annotations subject specific marking instructions m marks are for using a correct method and are not lost for purely numerical errors marks are for an accurate

mark scheme for november 2013 revision maths - Aug 01 2022

web mark scheme for gcse mathematics b linear general certificate of secondary education componentj567 04 mathematics paper 4 higher november 2013 ocr

general certificate of secondary education unit a502 02 - Sep 02 2022

web unit a502 02 mathematics b higher tier june 2013 ocr oxford cambridge and rsa is a leading uk awarding body providing a wide range of qualifications to meet the

mark scheme for march 2013 physics maths tutor - Nov 23 2021

web j567 04 mark scheme march 2013 2 subject specific marking instructions 1 m marks are for using a correct method and are not lost for purely numerical errors a marks are

general certificate of secondary education unit a503 02 - Dec 05 2022

web a503 02 mark scheme january 2013 2 subject specific marking instructions 1 m marks are for using a correct method and are not lost for purely numerical errors a marks are

ocr maths february 2013 higher mark scheme pdf salters - May 30 2022

web may 14 2023 ocr maths february 2013 higher mark scheme pdf is easy to use in our digital library an online right of entry to it is set as public therefore you can download it

general certificate of secondary education unit a502 02 - Dec 25 2021

web a502 02 mark scheme january 2013 2 subject specific marking instructions 1 m marks are for using a correct method and are not lost for purely numerical errors a marks are

past papers materials finder ocr - Sep 14 2023

web find past papers and mark schemes find past papers mark schemes examiner reports and practice materials to help you prepare for exams choose a subject to get started

mark scheme for march 2013 ocr - Jun 11 2023

web j567 04 mark scheme march 2013 2 subject specific marking instructions 1 m marks are for using a correct method and are not lost for purely numerical errors a marks are for

general certificate of secondary education unit a503 02 - Jan 06 2023

web a503 02 mark scheme november 2013 2 subject specific marking instructions 1 m marks are for using a correct method

and are not lost for purely numerical errors a