



basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

**NATIONAL
SENIOR CERTIFICATE
NASIONALE
SENIOR SERTIFIKAAT**

GRADE 11/GRAAD 11

MATHEMATICS P1/WISKUNDE VI

NOVEMBER 2013

MEMORANDUM

MARKS/PUNTE: 150

**This memorandum consists of 14 pages.
*Hierdie memorandum bestaan uit 14 bladsye.***

November 2013 Maths Paper 1 Memo

Peipei Pang

A red circular graphic with a gradient, appearing as a semi-circle or a partial circle, located to the right of the name bar.

November 2013 Maths Paper 1 Memo:

This book delves into November 2013 Maths Paper 1 Memo. November 2013 Maths Paper 1 Memo is an essential topic that needs to be grasped by everyone, ranging from students and scholars to the general public. The book will furnish comprehensive and in-depth insights into November 2013 Maths Paper 1 Memo, encompassing both the fundamentals and more intricate discussions.

1. This book is structured into several chapters, namely:
 - Chapter 1: Introduction to November 2013 Maths Paper 1 Memo
 - Chapter 2: Essential Elements of November 2013 Maths Paper 1 Memo
 - Chapter 3: November 2013 Maths Paper 1 Memo in Everyday Life
 - Chapter 4: November 2013 Maths Paper 1 Memo in Specific Contexts
 - Chapter 5: Conclusion
 2. In chapter 1, this book will provide an overview of November 2013 Maths Paper 1 Memo. The first chapter will explore what November 2013 Maths Paper 1 Memo is, why November 2013 Maths Paper 1 Memo is vital, and how to effectively learn about November 2013 Maths Paper 1 Memo.
 3. In chapter 2, this book will delve into the foundational concepts of November 2013 Maths Paper 1 Memo. The second chapter will elucidate the essential principles that need to be understood to grasp November 2013 Maths Paper 1 Memo in its entirety.
 4. In chapter 3, the author will examine the practical applications of November 2013 Maths Paper 1 Memo in daily life. This chapter will showcase real-world examples of how November 2013 Maths Paper 1 Memo can be effectively utilized in everyday scenarios.
 5. In chapter 4, the author will scrutinize the relevance of November 2013 Maths Paper 1 Memo in specific contexts. The fourth chapter will explore how November 2013 Maths Paper 1 Memo is applied in specialized fields, such as education, business, and technology.
 6. In chapter 5, this book will draw a conclusion about November 2013 Maths Paper 1 Memo. This chapter will summarize the key points that have been discussed throughout the book.
- This book is crafted in an easy-to-understand language and is complemented by engaging illustrations. This book is highly recommended for anyone seeking to gain a comprehensive understanding of November 2013 Maths Paper 1 Memo.

https://crm.avenza.com/book/Resources/Download_PDFS/Pre%20And%20Perinatal%20Massage%20Therapy.pdf

Table of Contents November 2013 Maths Paper 1 Memo

1. Understanding the eBook November 2013 Maths Paper 1 Memo
 - The Rise of Digital Reading November 2013 Maths Paper 1 Memo
 - Advantages of eBooks Over Traditional Books
2. Identifying November 2013 Maths Paper 1 Memo
 - 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 November 2013 Maths Paper 1 Memo
 - User-Friendly Interface
4. Exploring eBook Recommendations from November 2013 Maths Paper 1 Memo
 - Personalized Recommendations
 - November 2013 Maths Paper 1 Memo User Reviews and Ratings
 - November 2013 Maths Paper 1 Memo and Bestseller Lists
5. Accessing November 2013 Maths Paper 1 Memo Free and Paid eBooks
 - November 2013 Maths Paper 1 Memo Public Domain eBooks
 - November 2013 Maths Paper 1 Memo eBook Subscription Services
 - November 2013 Maths Paper 1 Memo Budget-Friendly Options
6. Navigating November 2013 Maths Paper 1 Memo eBook Formats
 - ePub, PDF, MOBI, and More
 - November 2013 Maths Paper 1 Memo Compatibility with Devices
 - November 2013 Maths Paper 1 Memo Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of November 2013 Maths Paper 1 Memo
 - Highlighting and Note-Taking November 2013 Maths Paper 1 Memo
 - Interactive Elements November 2013 Maths Paper 1 Memo

8. Staying Engaged with November 2013 Maths Paper 1 Memo
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers November 2013 Maths Paper 1 Memo
9. Balancing eBooks and Physical Books November 2013 Maths Paper 1 Memo
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection November 2013 Maths Paper 1 Memo
10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
11. Cultivating a Reading Routine November 2013 Maths Paper 1 Memo
 - Setting Reading Goals November 2013 Maths Paper 1 Memo
 - Carving Out Dedicated Reading Time
12. Sourcing Reliable Information of November 2013 Maths Paper 1 Memo
 - Fact-Checking eBook Content of November 2013 Maths Paper 1 Memo
 - 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

November 2013 Maths Paper 1 Memo 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 November 2013 Maths Paper 1 Memo 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 November 2013 Maths Paper 1 Memo 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 November 2013 Maths Paper 1 Memo 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 November 2013 Maths Paper 1 Memo 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. November 2013 Maths Paper 1 Memo is one of the best book in our library for free trial. We provide copy of November 2013 Maths Paper 1 Memo in digital format, so the resources that you find are reliable. There are also many Ebooks of related with November 2013 Maths Paper 1 Memo. Where to download November 2013 Maths Paper 1 Memo online for free? Are you looking for November 2013 Maths Paper 1 Memo PDF? This is definitely going to save you time and cash in something you should think about.

Find November 2013 Maths Paper 1 Memo :

pre and perinatal massage therapy

practice 8 geometric mean answers

pre entry law muk 2015 2016 results

practice ergometrics test transit bus opertaor

practice pccn questions

practice a 5 applying special right triangles workesheet answers

~~praxis 2 music content knowledge practice test~~

~~praxis 5169 study guide~~

pravinya question papers bing

praxis study guide 0021

pre referral intervention manual prim hawthorne educational

practice exams ap calculus multiple choice

prado owners manual

practice houghton mifflin 5th grade
praxis elementary education study guide 5015

November 2013 Maths Paper 1 Memo :

easy pa tisseries marocaines ftp popcake com - Jan 29 2022

web easy pa tisseries marocaines 3 3 more meaningful relationships anywhere in their life to read this book david roger founder and ceo at masterclass david bradford and carole robin taught interpersonal skills to mba candidates for a combined seventy five years on their legendary stanford graduate school of business course

pâtisseries marocaine recettes de pâtisseries orientales - Aug 16 2023

web retrouvez sur cuisinedumaroc com la nouvelle cuisine marocaine harira couscous tajines recettes classées par thèmes specialite marocaine l une des meilleures cuisine au monde plus de 10000 recettes marocaines sur cuisinedumaroc com

easy pa tisseries marocaines fwhlmail williamcurley co uk - Dec 28 2021

web easy pa tisseries marocaines 1 easy pa tisseries marocaines italian gelato project ediz illustrata brussels beer city the thursday murder club catalogue of the library of the boston athenæum petite patisserie connect mediterranean europe catalogue of the library of the boston athenaeum morocco west africa kaiju no 8 vol 1 morocco 200

pa tisseries marocaines easy app oaklandlibrary org - Feb 27 2022

web 4 pa tisseries marocaines easy 2022 01 16 kafka hopes to one day keep his pact with his childhood friend mina to join the japan defense force and fight by her side but while she s out neutralizing kaiju as third division captain kafka is stuck cleaning up the aftermath of her battles when a sudden rule change makes kafka eligible for the

easy pa tisseries marocaines sportidapp com - Sep 05 2022

web feb 22 2023 easy pa tisseries marocaines 2020 10 12 howard yates mediterranean europe oxford university press usa lonely planet presents the only non cruise guide to mediterranean europe full colour highlights and itineraries make route planning simple up front colour highlights section plus top 10 lists detailed itineraries

les pâtisseries marocaines hors circuit - Dec 08 2022

web may 16 2019 simples à réaliser les pâtisseries marocaines restent très appréciées des touristes et vous découvrirez le gout incomparable des chebakia et autre haloua rhifa d autres formes de ces pâtisseries marocaines vous seront familières comme les crêpes typiquement marocaines

easy pâtisseries marocaines ne fnac - Mar 11 2023

web feb 17 2023 nadia paprikas vous invite à découvrir les meilleures pâtisseries de son pays d origine le maroc pâtisseries du quotidien ou pâtisseries festives mariage ramadan apprenez à réaliser très facilement cornes de gazelle ghoribas aux

amandes makrout aux dattes roses des sables briouates aux amandes et au miel

pâtisserie marocaine laissez vous tenter par ces 4 recettes - Apr 12 2023

web que vous soyez débutant ou confirmé ces recettes faciles à suivre vous permettront de réussir des desserts savoureux et originaux n attendez plus pour vous lancer dans la préparation de ces

easy pâtisseries marocaines by nadia paprikas - Oct 06 2022

web easy pâtisseries marocaines by nadia paprikas easy pâtisseries marocaines by nadia paprikas saveurs marocaines rhodos bassum cora carmack the one with the celebration read ebooks les ruses de la nature emjack myonlineportal revampaw standardize cuento de telefonos celulares locura y muerte los algrie wiki algrie

pa tisseries marocaines easy paredeslepetitdejeuner panos be - Aug 04 2022

web within the pages of pa tisseries marocaines easy an enthralling opus penned by a highly acclaimed wordsmith readers set about an immersive expedition to unravel the intricate significance of language and its indelible imprint on our lives throughout this assessment we shall delve to the book is central

easy pa tisseries marocaines kelliemay com - Mar 31 2022

web jan 23 2023 easy pa tisseries marocaines 3 3 downloaded from kelliemay com on january 23 2023 by guest oct 12 2022 this easy weeknight dinner is loaded with fiber and protein and feeds a family of four with just one 8 ounce piece of fish and thanks to the whole grain pasta this 420 calorie per person dish is easy anti cheat

les meilleures pâtisseries à casablanca maroc en 2023 - Nov 07 2022

web les meilleures pâtisseries à casablanca maroc en 2023 petit futé guide de voyage maroc côte atlantique casablanca produits gourmands vins pains gâteaux chocolats glaces pâtisserie

easy pa tisseries marocaines - Jun 02 2022

web easy pa tisseries marocaines 3 3 through an alphabetical index throughout the frequency listing there are thematically organized lists of the top words from a variety of key topics such as sports weather clothing and family terms an engaging and highly useful resource the frequency dictionary of french will enable students

pâtisseries marocaines traditionnelles fekkas - Jul 15 2023

web les pâtisseries marocaines sont dominées par l ingrédient d amande elles se servent accompagnées du thé à la menthe marocaine the a la menthe marocain les 14 pâtisseries marocaines les plus connues et les plus consommées sont baghrir beghrir raghif ou autrement appelé crêpe marocaine est un

laissez vous envoûter par ces recettes de pâtisseries marocaines - Jun 14 2023

web la pâtisserie marocaine est une pâtisserie particulièrement riche et variée à déguster en accompagnement d un savoureux thé à la menthe ou d un café la pâtisserie marocaine est le plus souvent réalisée à base de miel et d amandes

cornes de gazelle ghoriba aux amandes baklawa de tétouan ou encore krichlat achoura des noms

[pâtisseries marocaines traditionnelles à marrakech maroc](#) - May 13 2023

web la pâtisserie marocaine offre une grande diversité de petits gâteaux beau visuellement avec un goût copieux à grignoter plutôt que des cupcakes et des gros gâteaux gras et crémeux nos chers clients étrangers sont toujours agréablement surpris par toutes les délicieuses pâtisseries marocaines que propose gatô

[easy pa tisseries marocaines pqr uiaf gov co](#) - May 01 2022

web the easy pa tisseries marocaines is universally compatible in the manner of any devices to read africa on a shoestring 2007 catalogue of the library of the boston athenaeum anonymous 2023 05 17 reprint of the original first published in 1874 the publishing house anatiposi publishes historical books as reprints

[pâtisseries marocaines pâtisserie orientale oueslati](#) - Jan 09 2023

web pâtisseries marocaines découvrez notre sélection de pâtisseries marocaines baklava chebakia mkharqa ou griouche cornes de gazelles kaab el ghzal feqqas mhanha crima kamoussa balgha etc 10 résultats affichés

[recettes de pâtisserie marocaine les recettes les mieux notées](#) - Feb 10 2023

web recettes de pâtisserie marocaine les recettes les mieux notées proposées par les internautes et approuvées par les chefs de 750g

[easy pa tisseries marocaines ftp popcake](#) - Jul 03 2022

web 4 easy pa tisseries marocaines 2022 07 12 napoleons petits fours sablés tartlets and much more the book opens with a section on twenty seven base recipes from which all others can be made including pâte brisée pâte sucrée sablé breton dacquoise pâte à choux feuilletée rapide and crème pâtissière it is then divided into

[12 zen buddhist practices that will change your life the](#) - Apr 17 2022

web jun 4 2020 4 practice mindful eating according to this 2016 harvard health publishing article the average american spends two and a half hours a day eating but more than half the time they are doing something else too zen practitioners value living in issoku or doing one thing at a time with purpose and integrity practice mindful eating by focusing on the *on zen practice body breath and mind barnes noble* - Oct 24 2022

web nov 24 2012 this updated landmark volume makes available for the first time in decades the teachings that were formative to a whole generation of american zen teachers and students conceived as an overarching primer on the practice of zen chapters in this volume address every aspect of practice beginning

on zen practice body breath and mind amazon com - Oct 04 2023

web oct 1 2002 on zen practice body breath and mind paperback october 1 2002 by hakuyu taizan maezumi author bernard glassman author 4 4 4 4 out of 5 stars 55 ratings

[on zen practice body breath mind free download borrow](#) - Jul 01 2023

web on zen practice body breath mind publication date 2002 topics sōtōshū doctrines spiritual life zen buddhism spiritual life sōtōsh

on zen practice body breath and mind zen peacemakers - Sep 03 2023

web on zen practice body breath and mind this updated landmark volume makes available for the first time in decades the teachings that were formative to a whole generation of american zen teachers and students

on zen practice body breath and mind amazon com au - Nov 24 2022

web on zen practice body breath and mind kindle edition by hakuyu taizan maezumi author 4 more format kindle edition 4 4 53 ratings see all formats and editions kindle 9 99 read with our free app paperback 38 51 6 new from 38 51

[on zen practice ii body breath and mind archive org](#) - Jul 21 2022

web on zen practice ii body breath and mind by maezumi hakuyu taizan glassman bernard tetsugen

on zen practice body breath and mind kindle edition - May 19 2022

web on zen practice body breath and mind ebook hakuyu taizan maezumi bernard glassman maezumi taizan glassman bernie aikens robert amazon ca kindle store

on zen practice body breath and mind softcover abebooks - Sep 22 2022

web conceived as an overarching primer on the practice of zen chapters in this volume address every aspect of practice beginning practice shikantaza chanting sesshin working with mu and the nature of koans in the intervening years since the publication of the earlier edition countless books have more

on zen practice the wisdom experience - Apr 29 2023

web body breath and mind taizan maezumi roshi bernard tetsugen glassman add to cart paperback 20 95 add to cart ebook 15 99 share this updated landmark volume makes available for the first time in decades the teachings that were formative to a whole generation of american zen teachers and students

on zen practice body breath mind publishers weekly - Aug 22 2022

web on zen practice body breath mind hakuyu taizan maezumi bernard tetsugen glassman foreword by robert aikens wisdom 14 95 208pp isbn 978 0 86171 315 8

download solutions on zen practice body breath and mind - Mar 17 2022

web to reach beyond the student s intellect to her or his deepest essence the whole body breathing mar 06 2022 the whole body breathing offers a clear practice that guides you in the gradual discovery of your spine s vitality body by breath may 20 2023 in the hierarchy of life breath always wins

on zen practice body breath and mind google books - Mar 29 2023

web conceived as an overarching primer on the practice of zen chapters in this volume address every aspect of practice beginning practice shikantaza chanting sesshin working with mu and

on zen practice body breath and mind daily zen - Dec 26 2022

web on zen practice body breath and mind 1999 author bernard glassman hakuyu taizan maezumi view this book on amazon this updated landmark volume makes available for the first time in decades the teachings that were formative to a whole generation of american zen teachers and students

on zen practice body breath and mind paperback amazon - May 31 2023

web on zen practice body breath and mind maezumi roshi taizan glassman bernie aiken robert nakao wendy egyoku buksbazen john daishin amazon sg books

on zen practice ii body breath and mind docslib - Feb 13 2022

web in order to adjust your body and mind ideally in other words in order to be really ready to go two or three days should be spent in either counting the breath or following the breath by which you can create a very harmonious steady condition in both mind and body

how to practice zen meditation attending to place body breath and mind - Jun 19 2022

web jan 20 2022 this chapter provides instructions for practicing zen meditation zazen it explains how to attend to place body breath and mind first it explains how to set up a good space for meditation and it discusses when how

on zen practice body breath and mind amazon co uk - Jan 27 2023

web apr 1 1999 on zen practice addresses every critical aspect of zen practice beginning meditation shikantaza just sitting the nature of koans working with mu retreats chanting and more its contributors are some of modern zen s foremost teachers print length 208 pages language english publisher wisdom publications u s publication date 1 april 1999

on zen practice body breath and mind goodreads - Aug 02 2023

web on zen practice body breath and mind taizan maezumi bernie glassman editor robert aitken foreword 3 98 103 ratings8 reviews this updated landmark volume makes available for the first time in decades the teachings that were formative to a whole generation of american zen teachers and students

on zen practice body breath and mind google play - Feb 25 2023

web on zen practice body breath and mind ebook written by taizan maezumi bernie glassman read this book using google play books app on your pc android ios devices download for offline reading highlight bookmark or take notes while you read on zen practice body breath and mind

list of tallest towers wikipedia - Feb 07 2023

web list of tallest towers the tokyo skytree in tokyo japan has been the tallest tower since 2012 this list includes extant

buildings that fulfill the engineering definition of a tower a tall human structure always taller than it is wide for public or regular operational access by humans but not for living in or office work and

the new shaw tower is unveiled here s what it looks like 99 co - Aug 13 2023

web oct 30 2020 new shaw tower to have retail grade a office space compared to 134 metres previously the new shaw tower will rise to a height of nearly 200 metres the tower s modern glass and steel architecture will blend in seamlessly with neighbouring developments but there s much more to the building than simply looks the new shaw

getting there sim lim tower - Apr 09 2023

web sim lim tower is located near to rochor dt13 bugis ew12 dt14 and mrt stations by bus sim lim tower is located near to several bus stops located at after sim lim square queen street terminal ophir road opp rochor centre jalan besar road and beforesim lim towers bus services include 64 65 130 139 147 48 57 130 2n 4n

tower club singapore - Sep 14 2023

web soaring above the bustling cbd tower club singapore resides in a prime central location and brings a premier private setting where the business elite meet network and entertain as a premier private business club tower club singapore brings an outstanding experience that surpasses all expectations

frasers tower singapore - Jul 12 2023

web a prime addition to the bustling city centre frasers tower is an exclusive 38 storey premium grade a office development situated within singapore s core central business district the 235 metre tall building features indoor and outdoor working areas surrounded by lush greenery and a 3 storey cascading retail podium

capital tower singapore wikipedia - Jan 06 2023

web capital tower is a 52 storey 254 m 833 ft skyscraper completed in 2000 in the shenton way tanjong pagar financial district of singapore located at robinson road next to tanjong pagar mrt station it is the fourth tallest skyscraper in the city

tower transit singapore facebook - Jun 11 2023

web tower transit singapore singapore 15 555 likes 369 talking about this tower transit singapore puts a personal touch on world class bus service moving people never buses

shaw tower will be gone by 2023 mothership sg - Mar 08 2023

web aug 22 2019 in august 2018 the straits times reported that the building will most likely be torn down to make way for a new 35 storey office and retail building by 2023 in the same year tenants were served

tower transit singapore - Oct 15 2023

web tower transit aims to be the world s most respected public transport operator in the world s top cities which is why we re here in singapore and in london operating people centric bus services that are personable and dependable that s how we

roll

tower wikipedia - May 10 2023

web roman tower reconstruction at limes taunus germany a tower is a tall structure taller than it is wide often by a significant factor towers are distinguished from masts by their lack of guy wires and are therefore along with tall buildings self supporting structures