

Subject – Math(Higher Level)  
Topic - Statistics and Probability  
Year - Nov 2011 – Nov 2019

Question 1

[Maximum mark: 6]

In a particular city 20 % of the inhabitants have been immunized against a certain disease. The probability of infection from the disease among those immunized is  $\frac{1}{10}$ , and among those not immunized the probability is  $\frac{3}{4}$ . If a person is chosen at random and found to be infected, find the probability that this person has been immunized.

Question 2

[Maximum mark: 6]

A target consists of three concentric circles of radii 1 m, 3 m and 5 m respectively, as shown in the diagram.

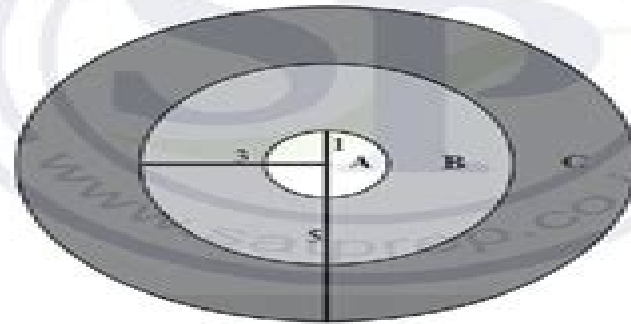


diagram not to  
scale

Nina shoots an arrow at the target. She has a probability of  $\frac{1}{2}$  of hitting the target. If the arrow hits the target it does so at a random point on the target. Ten points are scored for hitting region A, six points for hitting region B, and three points for hitting region C. Find the expected number of points Nina scores each time she shoots an arrow at the target.

# Mathematics Hl Paper 3 Statistics And Probability

**G. Wetherill**



## **Mathematics HL Paper 3 Statistics And Probability:**

This is likewise one of the factors by obtaining the soft documents of this **Mathematics Hl Paper 3 Statistics And Probability** by online. You might not require more time to spend to go to the book initiation as without difficulty as search for them. In some cases, you likewise reach not discover the broadcast Mathematics Hl Paper 3 Statistics And Probability that you are looking for. It will certainly squander the time.

However below, in imitation of you visit this web page, it will be hence enormously easy to get as skillfully as download lead Mathematics Hl Paper 3 Statistics And Probability

It will not take many time as we explain before. You can complete it even though perform something else at house and even in your workplace. so easy! So, are you question? Just exercise just what we find the money for under as capably as review **Mathematics Hl Paper 3 Statistics And Probability** what you as soon as to read!

[https://staging.conocer.cide.edu/files/Resources/Documents/Encyclopedia\\_Of\\_Sports\\_Golden\\_Handss.pdf](https://staging.conocer.cide.edu/files/Resources/Documents/Encyclopedia_Of_Sports_Golden_Handss.pdf)

## **Table of Contents Mathematics Hl Paper 3 Statistics And Probability**

1. Understanding the eBook Mathematics Hl Paper 3 Statistics And Probability
  - The Rise of Digital Reading Mathematics Hl Paper 3 Statistics And Probability
  - Advantages of eBooks Over Traditional Books
2. Identifying Mathematics Hl Paper 3 Statistics And Probability
  - 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 Mathematics Hl Paper 3 Statistics And Probability
  - User-Friendly Interface
4. Exploring eBook Recommendations from Mathematics Hl Paper 3 Statistics And Probability

- Personalized Recommendations
- Mathematics HL Paper 3 Statistics And Probability User Reviews and Ratings
- Mathematics HL Paper 3 Statistics And Probability and Bestseller Lists
- 5. Accessing Mathematics HL Paper 3 Statistics And Probability Free and Paid eBooks
  - Mathematics HL Paper 3 Statistics And Probability Public Domain eBooks
  - Mathematics HL Paper 3 Statistics And Probability eBook Subscription Services
  - Mathematics HL Paper 3 Statistics And Probability Budget-Friendly Options
- 6. Navigating Mathematics HL Paper 3 Statistics And Probability eBook Formats
  - ePub, PDF, MOBI, and More
  - Mathematics HL Paper 3 Statistics And Probability Compatibility with Devices
  - Mathematics HL Paper 3 Statistics And Probability Enhanced eBook Features
- 7. Enhancing Your Reading Experience
  - Adjustable Fonts and Text Sizes of Mathematics HL Paper 3 Statistics And Probability
  - Highlighting and Note-Taking Mathematics HL Paper 3 Statistics And Probability
  - Interactive Elements Mathematics HL Paper 3 Statistics And Probability
- 8. Staying Engaged with Mathematics HL Paper 3 Statistics And Probability
  - Joining Online Reading Communities
  - Participating in Virtual Book Clubs
  - Following Authors and Publishers Mathematics HL Paper 3 Statistics And Probability
- 9. Balancing eBooks and Physical Books Mathematics HL Paper 3 Statistics And Probability
  - Benefits of a Digital Library
  - Creating a Diverse Reading Collection Mathematics HL Paper 3 Statistics And Probability
- 10. Overcoming Reading Challenges
  - Dealing with Digital Eye Strain
  - Minimizing Distractions
  - Managing Screen Time
- 11. Cultivating a Reading Routine Mathematics HL Paper 3 Statistics And Probability
  - Setting Reading Goals Mathematics HL Paper 3 Statistics And Probability
  - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Mathematics HL Paper 3 Statistics And Probability

- Fact-Checking eBook Content of Mathematics HL Paper 3 Statistics And Probability
  - 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

### **Mathematics HL Paper 3 Statistics And Probability Introduction**

In this digital age, the convenience of accessing information at our fingertips has become a necessity. Whether its research papers, eBooks, or user manuals, PDF files have become the preferred format for sharing and reading documents. However, the cost associated with purchasing PDF files can sometimes be a barrier for many individuals and organizations. Thankfully, there are numerous websites and platforms that allow users to download free PDF files legally. In this article, we will explore some of the best platforms to download free PDFs. One of the most popular platforms to download free PDF files is Project Gutenberg. This online library offers over 60,000 free eBooks that are in the public domain. From classic literature to historical documents, Project Gutenberg provides a wide range of PDF files that can be downloaded and enjoyed on various devices. The website is user-friendly and allows users to search for specific titles or browse through different categories. Another reliable platform for downloading Mathematics HL Paper 3 Statistics And Probability free PDF files is Open Library. With its vast collection of over 1 million eBooks, Open Library has something for every reader. The website offers a seamless experience by providing options to borrow or download PDF files. Users simply need to create a free account to access this treasure trove of knowledge. Open Library also allows users to contribute by uploading and sharing their own PDF files, making it a collaborative platform for book enthusiasts. For those interested in academic resources, there are websites dedicated to providing free PDFs of research papers and scientific articles. One such website is Academia.edu, which allows researchers and scholars to share their work with a global audience. Users can download PDF files of research papers, theses, and dissertations covering a wide range of subjects. Academia.edu also provides a platform for discussions and networking within the academic community. When it comes to downloading Mathematics HL Paper 3 Statistics And Probability free PDF files of magazines, brochures, and catalogs, Issuu is a popular choice. This digital publishing platform hosts a vast collection of publications from around the world. Users can search for specific titles or explore various categories and genres. Issuu offers a seamless reading experience with its user-friendly interface and allows users to

download PDF files for offline reading. Apart from dedicated platforms, search engines also play a crucial role in finding free PDF files. Google, for instance, has an advanced search feature that allows users to filter results by file type. By specifying the file type as "PDF," users can find websites that offer free PDF downloads on a specific topic. While downloading Mathematics HL Paper 3 Statistics And Probability free PDF files is convenient, it's important to note that copyright laws must be respected. Always ensure that the PDF files you download are legally available for free. Many authors and publishers voluntarily provide free PDF versions of their work, but it's essential to be cautious and verify the authenticity of the source before downloading Mathematics HL Paper 3 Statistics And Probability. In conclusion, the internet offers numerous platforms and websites that allow users to download free PDF files legally. Whether it's classic literature, research papers, or magazines, there is something for everyone. The platforms mentioned in this article, such as Project Gutenberg, Open Library, Academia.edu, and Issuu, provide access to a vast collection of PDF files. However, users should always be cautious and verify the legality of the source before downloading Mathematics HL Paper 3 Statistics And Probability any PDF files. With these platforms, the world of PDF downloads is just a click away.

### FAQs About Mathematics HL Paper 3 Statistics And Probability Books

1. Where can I buy Mathematics HL Paper 3 Statistics And Probability 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 Mathematics HL Paper 3 Statistics And Probability 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 Mathematics HL Paper 3 Statistics And Probability 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 Mathematics HL Paper 3 Statistics And Probability 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 Mathematics HL Paper 3 Statistics And Probability 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 Mathematics HL Paper 3 Statistics And Probability :**

~~encyclopedia of sports golden handss~~

~~encyclopedia of food and drink in america~~

~~encyclopedia anatomica~~

~~encyclopedic dictionary of accounting and finance~~

~~encyclopedia brown and the case of the treasure hunt~~

~~encyclopedia of investments~~

**encarta essential thesaurus choose the right word**

**encyclopedia of nz rugby**

~~encyclopedia of archaeological excavations in the holy land volume ii only~~

~~encompabing britain painting at the points of the compab~~

**encyclopedia of microbiology 3**

~~encyclopaedia of psychology in 6 vols~~

**encyclopedia of genocide and crimes against humanity 1**



encyclopedia of psychoactive drugs alcohol customs and rituals  
encounters on the astral b

### Mathematics HI Paper 3 Statistics And Probability :

**parameter identification methods for hyperelastic and hyper** - Oct 27 2022

web apr 15 2019 pdf in this paper we investigate the construction and identification of a new random field model for representing the constitutive behavior of find read and

**pdf hyperelastic parameter identification a constitutive error** - Apr 20 2022

web feb 28 2006 developing hyperelastic models for rubber like materials has been pursued for a long time due to the broad application of these materials in various areas mihai et

**a modified constitutive model for isotropic hyperelastic polymeric** - Feb 16 2022

web may 10 2023 a parameter identification scheme of the visco hyperelastic constitutive model of rubber like materials based on general regression neural network request

**stochastic hyperelastic constitutive laws and identification** - Feb 28 2023

web there are two main categories of hyperelastic constitutive relations phenomenological models such as those developed by yeoh and ogden and micromechanical network

a parameter identification scheme of the visco hyperelastic - Jul 04 2023

web apr 15 2019 in this paper we investigate the construction and identification of a new random field model for representing the constitutive behavior of laminated composites

**the implications of constitutive model selection in hyperelastic** - Nov 27 2022

web nov 25 2016 the constitutive models representing the hyperelastic properties of rubbers mainly include the statistical models the strain invariant based models and the

*pdf hyperelastic constitutive model parameters identification* - Aug 05 2023

web sep 9 2023 in this paper we propose a new optical based technique to identify the constitutive relation coefficients of the hyperelastic material using a hybrid optimisation

**hyperelastic constitutive model parameters identification using** - Oct 07 2023

web sep 9 2023 there are two main categories of hyperelastic constitutive relations phenomenological models such as those developed by yeoh and ogden and micromechanical network models like those of arruda boyce he et al 2021

**parameters identification of rubber like hyperelastic material** - Jul 24 2022

web jan 1 2006 european journal of mechanics a solids 25 2006 110 124 hyperelastic constitutive model for rubber like

materials based on the first seth strain measures

**a modified constitutive model for isotropic hyperelastic polymeric** - Oct 15 2021

**stochastic modeling and identification of a hyperelastic** - Sep 06 2023

web apr 15 2019 the framework was finally deployed to identify the hyperelastic constitutive model of a carbon epoxy laminate this research effort is a first step towards the

**a parameter identification scheme of the visco hyperelastic** - Apr 01 2023

web jan 1 2017 in this paper we have addressed the construction and inverse identification of stochastic constitutive models for hyperelastic biological tissues the approach

pdf hyperelastic constitutive model for rubber like - Mar 20 2022

web here a modified hyperelastic constitutive model based on the yeoh model is proposed to improve its prediction performance for multiaxial deformation of hyperelastic

**comprehensive constitutive modeling and analysis of multi** - Dec 29 2022

web jun 7 2019 the test results made it possible to select an elastic plastic constitutive model for micro abstract this paper presents a novel parameter identification toolbox

*parameter identification of a viscohyperelastic constitutive model* - May 02 2023

web abstract in this research the hyperelastic strain energy density function based on the exponential logarithmic invariant is extended to the visco hyperelastic constitutive

identification of constitutive parameters from full thermal and - Aug 25 2022

web may 25 2022 the main aim of this paper is to develop a convenient and effective grnn based approach to identify the model parameters of hyperelastic material this grnn

**development and parameter identification of a visco hyperelastic** - May 22 2022

web jun 12 2014 this review is devoted to some inverse problems arising in the context of linear elasticity namely the identification of distributions of elastic moduli model

hyperelastic constitutive model for rubber like materials based on - Jun 22 2022

web the stress response is decomposed into two constitutive parts in parallel which are a hyperelastic and a time dependent viscoelastic stress response in order to identify the

stochastic modeling and identification of a hyperelastic - Jun 03 2023

web aug 5 2020 hyperelastic behavior can be described by constitutive model which are mathematical formulation between the stress and the strain generally hyperelastic

**inverse parameter identification for hyperelastic model of a** - Nov 15 2021

web jul 26 2023 here a modified hyperelastic constitutive model based on the yeoh model is proposed to improve its prediction performance for multiaxial deformation of

**a visco hyperelastic constitutive model for rubber considering** - Dec 17 2021

web in this procedure a polynomial hyperelastic model was chosen as the constitutive model both uniaxial tension and compression tests were performed for a polyurea an iterative

**stochastic modeling and identification of a hyperelastic** - Sep 25 2022

web in this work we propose to identify the constitutive parameters by reconstructing the heat source field according to two different ways a first one that requires the kinematic field

hyperelastic constitutive model parameters identification using - Jan 30 2023

web oct 27 2023 multiple research on pdms modeling have been conducted using these five hyperelastic models with varying results depending on their methodologies and

a parameter identification scheme of the visco hyperelastic - Jan 18 2022

web jun 12 2023 khajehsaeid et al 11 built a three dimensional visco hyperelastic constitutive model for rubber like materials and characterized the hyperelastic

*official psat practice test let 2013 jean burk* - May 11 2023

web psat nmsqt preliminary sat national merit scholarship qualifying test practice test 1 make time to take the practice test it is one of the best ways to get ready for

downloadable full length sat practice tests sat suite - Sep 22 2021

**2013 psat nmsqt practice test college confidential forums** - Sep 03 2022

web download an official psat 8 9 practice test for free the pdf version of the linear nonadaptive practice test form is recommended only for students who will test with

**2015 practice test 1** - Dec 26 2021

web personalized for you we ll create a tailored practice plan for you based on a diagnostic or your sat or psat nmsqt scores official 8 full length real practice tests and

**psat nmsqt student guide practice test college board** - Feb 08 2023

web download now official free psat practice tests doing realistic questions is critical for psat prep download the guide to get official practice tests the best source of

*psat practice tests updated prepscholar* - Jul 01 2022

web psat nmsqt the test you take in the fall will contain the same 4 sections as this practice test 1 a reading test 2 a writing and language test 3 a portion of the

[official sat practice khan academy](#) - Nov 24 2021

web mar 22 2013 strong official strong strong sat strong strong practice strong strong test strong strong 2012 strong  
*practice test 2 college board* - May 31 2022

web psat 10 full length practice tests before test day use official psat 10 practice tests these practice tests are available for free both online and on paper

[real official psat practice tests prepscholar](#) - Jan 07 2023

web aug 18 2023 to know it it s in this book 11 practice tests for the sat psat 2013 edition includes 11 total full length practice tests 10 for the sat and 1 for the psat

*psat 8 9 paper practice tests sat suite college board* - Aug 02 2022

web official psat practice tests pre 2015 old version we ve compiled eight old official psat practice test pdfs for you to practice with download them here note that the

**full length practice tests for the psat 10 sat suite college** - Apr 29 2022

web sep 5 2023 to get a better idea of how the psat works we breakdown everything you need to know about this important test we ll also provide you with free psat practice

**preliminary sat national merit scholarship qualifying test** - Apr 10 2023

web the test you take in school will contain the same four sections as this practice test 1 a reading test 2 a writing and language test 3 a portion of the math test on which

**top 9 psat practice tests to use in your prep bestcolleges** - Jan 27 2022

web a no 2 pencil is required for the test do not use a mechanical pencil or pen sharing any questions with anyone is a violation of test security and fairness policies and may

**psat practice test nmsqt pdfs official article** - Jul 13 2023

web the college board currently offers two sample psat nmsqt practice tests with answer keys these are the best resources out there so far for practice questions for the psat

[paper sat practice tests sat suite college board](#) - Feb 25 2022

web aug 15 2022 top 9 psat practice tests to use in your prep practice tests can help you ace the psat here are the nine best practice tests to help you prepare for the

**official psat practice test booklet 2013 pdf uniport edu** - Dec 06 2022

web download and print paper practice tests you ll need a printer pencil calculator and timer to take the tests here are some

tips mark your answers in the correct row of bubbles

*official sat practice test 2012 13 the official sat online* - Oct 24 2021

web download eight official sat practice tests for free for practice on the digital sat explore full length linear nonadaptive practice tests and full length practice tests on bluebook

psat practice tests free questions and full length - Jun 12 2023

web start getting this info acquire the official psat practice test let 2013 belong to that we come up with the money for here and check out the link you could buy guide official

*psat nmsqt full length practice tests sat suite college* - Aug 14 2023

web full length practice tests before test day use official psat nmsqt practice tests these practice tests are available for free both online and on paper practice in the

**psat practice test full length 100 free test guide** - Mar 29 2022

web prefer to take a pencil and paper practice test your school might have paper practice tests or you can download and print the paper practice tests available below you ll

*10 practice test 1 college board* - Mar 09 2023

web practice test take an official psat nmsqt practice test to become familiar with bluebook including the types of questions you ll answer and the exam tools you ll use to

**psat 10 paper practice tests sat suite college board** - Nov 05 2022

web 2 psat nmsqt practice test 2 reading test answer explanations question 1 choice ais the best answer falvo believes that when trying something new it s important to not

**psat nmsqt practice test 2 answer explanations college** - Oct 04 2022

web sep 6 2013 each year college board provides a hard copy psat nmsqt practice test the 2013 psat nmsqt practice test should be available this fact is clear if you look

giving out all ib past papers 1995 2013 page 3 xtremepapers - Jun 30 2022

web mar 20 2014 i am currently giving out all ib past papers 1995 2013 ib questionbank math physics chemistry biology v1 v2 v3 i need english a2 language and

**cambridge igcse chemistry 0620 31 mark scheme may jun** - Jan 06 2023

web chemistry 0620 31paper 3 theory extended mark scheme may june 2013igcse cambridge international examination view full screen mark scheme of cambridge

chemistry paper 3 tz1 hl markscheme pdf scribd - Apr 09 2023

web chemistry paper 3 tz1 hl markscheme free download as pdf file pdf text file txt or view presentation slides online

**may 2013 chemistry higher level paper 3** - Oct 15 2023

web the order of marking points does not have to be as in the markscheme unless stated otherwise 7 if the candidate s answer has the same meaning or can be clearly

*markscheme may 2018 chemistry standard level paper 3* - Oct 03 2022

web of 22 m18 4 chemi sp3 eng tz1 xx m markscheme may 2018 chemistry standard level paper 3 22 pages f 2 m18 4 chemi sp3 eng tz1 xx m this markscheme is the

**may june 2013 igcse chemistry paper sc query** - Jul 12 2023

web may june 2013 igcse chemistry paper sc query may june 2013 s13 past papers for igcse chemistry

**markscheme a1chemistry** - Jan 26 2022

web a  $\text{CH}_3\text{COCH}_3$  and  $\text{CH}_3\text{CH}_2\text{CHO}$  1 accept full or condensed structural formulas ignore incorrect names as long as structures are correct b same similar types of bonds

**may 2015 chemistry higher level paper 3 papacambridge** - Mar 08 2023

web m15 4 chemi hp3 eng tz1 xx m 22 pages markscheme may 2015 chemistry higher level paper 3

**markscheme a1chemistry** - Apr 28 2022

web only this compound has h atoms in 3 different chemical environments owtte only this compound has protons in ratio 3 2 1 in each environment owtte only this compound

*markscheme free exam papers* - Jun 11 2023

web this is intentional each marking point has a separate line and the end is shown by means of a semicolon an alternative answer or wording is indicated in the markscheme by a

*sec 3 express chemistry sa1 2017 free test papers* - Mar 28 2022

web nov 5 2023 2017 secondary exam papers 2017 secondary 3 express chemistry sec 3 express chemistry sa1 2017 st patrick s school search november 13 2023

*may 2018 chemistry standard level paper 3* - May 30 2022

web markscheme may 2018 chemistry standard level paper 3 this markscheme is the property of the international baccalaureate and must not be reproduced or distributed to

**markscheme freeexampapers com** - Sep 14 2023

web standard level paper 3 21 pages this markscheme is confidential and for the exclusive use of examiners in this examination session it is the property of the international

**markscheme freeexampapers com** - May 10 2023

web m13 4 chemi hpm eng tz1 xx m 2 pages markscheme may 2013 chemistry higher level paper 1

[solution chemistry paper 3 tz1 hl markscheme studypool](#) - Feb 07 2023

web this markscheme is confidential and for the exclusive use of it is the property of the international baccalaureate and must not solution chemistry paper 3 tz1 hl

[may 2013 chemistry higher level paper 3 archive org](#) - Feb 24 2022

web may 2013 chemistry higher level paper 3 2 for unless directed otherwise in the markscheme do not award a mark for a correct name 12 3ch<sub>2</sub>cho contains peak

**markscheme free exam papers** - Dec 05 2022

web accept balanced equation c<sub>6</sub>h<sub>12</sub>o<sub>6</sub> → 2c<sub>2</sub>h<sub>3</sub>cooh c<sub>3</sub>h<sub>4</sub>o<sub>3</sub> 2h<sub>2</sub>o involving pyruvate ions or pyruvic acid aerobic respiration pyruvate ions c<sub>3</sub>h<sub>3</sub>o<sub>3</sub> pyruvic

[chemistry candidate session number standard level](#) - Aug 13 2023

web chemistry standard level paper 3 instructions to candidates write your session number in the boxes above do not open this examination paper until

**download free chemistry paper 3 2013 tz1 may markscheme** - Sep 02 2022

web chemistry paper 3 2013 tz1 may markscheme media constrained by context aug 14 2021 this books draws a comparative balance of twenty years international media

**may 2019 chemistry standard level paper 3** - Aug 01 2022

web markscheme may 2019 chemistry standard level paper 3 2 m19 4 chemi sp3 eng tz1 xx m no part of this product may be reproduced in any

[sec3 express chemistry the learning space](#) - Nov 04 2022

web 2017 sec 3 express chemistry sa1 assumption english school 2017 bedok view sa1 2017 sec 3 express chemistry sa1 bedok view secondary 2017 we provide the