

**GRADE 11 MATHEMATICS
NOVEMBER EXAMINATION PAPER 2**

QUESTION 1

1.1 Calculate the following with the use of a calculator:

1.1.1 $\sin 43^\circ + \cos 47^\circ$ (1)

1.1.2 $\tan^2 50^\circ$ (1)

1.1.3 $\cot 33^\circ + \operatorname{cosec} 15^\circ$ (1)

1.2 If $A = 34,3^\circ$ and $B = 22,2^\circ$, calculate the following to two decimal places:

1.2.1 $\sin (A + B)$ (2)

1.2.2 $\sec \left(\frac{A}{2} \right)$ (2)

1.3 Calculate the following without the use of a calculator:

1.3.1 $\sin 30^\circ + \cos 60^\circ$ (1)

1.3.2 $\tan 45^\circ + \cos 45^\circ$ (1)

1.3.3 $\cos 90^\circ + \sin 90^\circ$ (1)

[12]

QUESTION 2

Without the use of a calculator, answer the following questions:

2.1 Given $\cos \theta = -\frac{1}{5}$ and $0^\circ \leq \theta \leq 180^\circ$
Use a diagram to determine the values of:

2.1.1 $\tan (180^\circ + \theta)$ (1)

2.1.2 $3\sin (\theta - 90^\circ)$ (2)

2.2 Simplify the following expression: $\frac{\sin(-230^\circ)}{\cos(240^\circ)} + \frac{\cos(190^\circ)}{\sin(260^\circ)}$ (5)

2.3 Prove that: $\tan \theta \sqrt{\frac{1}{\sin^2 \theta} - 1} = 1$ (4)

2.4 Determine the general solution for: $3\sin^2 \theta + 1 = \sin \theta$ (6)

[28]

QUESTION 3

3.1 Sketch on the same set of axes the graphs for:

$f(x) = -2\cos x$ and $g(x) = \sin 2x$, for the interval $-90^\circ \leq x \leq 180^\circ$.

Show the coordinates of the turning points and all axis intercepts. (5)

3.2 Study the following sketch and determine the value of $\cos \theta - \cos \phi$, without the use of a calculator.



(5)
[10]

QUESTION 4

In the diagram below, the angle between line AB and the x-axis is β . The angle between line CD and the x-axis is θ . A and D are the x-axis intercept points for lines AB and CD respectively. The coordinates of point B are $(\sqrt{3}, 2)$.

The intercept point E, of lines AB and CD lies on the y-axis. $\angle EDC = 63,69^\circ$

The equation of the line CD is given as: $3x + 2y = 6$



4.1 Determine the coordinates of E. (2)

4.2 Calculate the numerical value of α . (2)

4.3 Calculate the numerical value of β . (2)

Question 1 November 2014 Grade 11 Maths Paper2

Raffaela Di Napoli



Question 1 November 2014 Grade 11 Maths Paper2:

Question 1 November 2014 Grade 11 Maths Paper2: Bestsellers in 2023 The year 2023 has witnessed a noteworthy surge in literary brilliance, with numerous compelling novels captivating the hearts of readers worldwide. Lets delve into the realm of top-selling books, exploring the captivating narratives that have enthralled audiences this year. The Must-Read : Colleen Hoover's "It Ends with Us" This touching tale of love, loss, and resilience has captivated readers with its raw and emotional exploration of domestic abuse. Hoover skillfully weaves a story of hope and healing, reminding us that even in the darkest of times, the human spirit can prevail. Uncover the Best : Taylor Jenkins Reids "The Seven Husbands of Evelyn Hugo" This captivating historical fiction novel unravels the life of Evelyn Hugo, a Hollywood icon who defies expectations and societal norms to pursue her dreams. Reids captivating storytelling and compelling characters transport readers to a bygone era, immersing them in a world of glamour, ambition, and self-discovery. Discover the Magic : Delia Owens "Where the Crawdads Sing" This mesmerizing coming-of-age story follows Kya Clark, a young woman who grows up alone in the marshes of North Carolina. Owens weaves a tale of resilience, survival, and the transformative power of nature, captivating readers with its evocative prose and mesmerizing setting. These bestselling novels represent just a fraction of the literary treasures that have emerged in 2023. Whether you seek tales of romance, adventure, or personal growth, the world of literature offers an abundance of compelling stories waiting to be discovered. The novel begins with Richard Papen, a bright but troubled young man, arriving at Hampden College. Richard is immediately drawn to the group of students who call themselves the Classics Club. The club is led by Henry Winter, a brilliant and charismatic young man. Henry is obsessed with Greek mythology and philosophy, and he quickly draws Richard into his world. The other members of the Classics Club are equally as fascinating. Bunny Corcoran is a wealthy and spoiled young man who is always looking for a good time. Charles Tavis is a quiet and reserved young man who is deeply in love with Henry. Camilla Macaulay is a beautiful and intelligent young woman who is drawn to the power and danger of the Classics Club. The students are all deeply in love with Morrow, and they are willing to do anything to please him. Morrow is a complex and mysterious figure, and he seems to be manipulating the students for his own purposes. As the students become more involved with Morrow, they begin to commit increasingly dangerous acts. The Secret History is a masterful and suspenseful novel that will keep you guessing until the very end. The novel is a cautionary tale about the dangers of obsession and the power of evil.

https://crm.avenza.com/data/book-search/HomePages/physics_grade_1november_2013_paper_gauteng.pdf

Table of Contents Question 1 November 2014 Grade 11 Maths Paper2

1. Understanding the eBook Question 1 November 2014 Grade 11 Maths Paper2
 - The Rise of Digital Reading Question 1 November 2014 Grade 11 Maths Paper2
 - Advantages of eBooks Over Traditional Books
2. Identifying Question 1 November 2014 Grade 11 Maths Paper2
 - 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 Question 1 November 2014 Grade 11 Maths Paper2
 - User-Friendly Interface
4. Exploring eBook Recommendations from Question 1 November 2014 Grade 11 Maths Paper2
 - Personalized Recommendations
 - Question 1 November 2014 Grade 11 Maths Paper2 User Reviews and Ratings
 - Question 1 November 2014 Grade 11 Maths Paper2 and Bestseller Lists
5. Accessing Question 1 November 2014 Grade 11 Maths Paper2 Free and Paid eBooks
 - Question 1 November 2014 Grade 11 Maths Paper2 Public Domain eBooks
 - Question 1 November 2014 Grade 11 Maths Paper2 eBook Subscription Services
 - Question 1 November 2014 Grade 11 Maths Paper2 Budget-Friendly Options
6. Navigating Question 1 November 2014 Grade 11 Maths Paper2 eBook Formats
 - ePub, PDF, MOBI, and More
 - Question 1 November 2014 Grade 11 Maths Paper2 Compatibility with Devices
 - Question 1 November 2014 Grade 11 Maths Paper2 Enhanced eBook Features
7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Question 1 November 2014 Grade 11 Maths Paper2
 - Highlighting and Note-Taking Question 1 November 2014 Grade 11 Maths Paper2
 - Interactive Elements Question 1 November 2014 Grade 11 Maths Paper2
8. Staying Engaged with Question 1 November 2014 Grade 11 Maths Paper2

- Joining Online Reading Communities
- Participating in Virtual Book Clubs
- Following Authors and Publishers Question 1 November 2014 Grade 11 Maths Paper2
- 9. Balancing eBooks and Physical Books Question 1 November 2014 Grade 11 Maths Paper2
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Question 1 November 2014 Grade 11 Maths Paper2
- 10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
- 11. Cultivating a Reading Routine Question 1 November 2014 Grade 11 Maths Paper2
 - Setting Reading Goals Question 1 November 2014 Grade 11 Maths Paper2
 - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Question 1 November 2014 Grade 11 Maths Paper2
 - Fact-Checking eBook Content of Question 1 November 2014 Grade 11 Maths Paper2
 - 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

Question 1 November 2014 Grade 11 Maths Paper2 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 Question 1 November 2014 Grade 11 Maths Paper2 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 Question 1 November 2014 Grade 11 Maths Paper2 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 Question 1 November 2014 Grade 11 Maths Paper2 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 Question 1 November 2014 Grade 11 Maths Paper2 Books

What is a Question 1 November 2014 Grade 11 Maths Paper2 PDF? A PDF (Portable Document Format) is a file format developed by Adobe that preserves the layout and formatting of a document, regardless of the software, hardware, or operating system used to view or print it. **How do I create a Question 1 November 2014 Grade 11 Maths Paper2 PDF?** There are several ways to create a PDF: Use software like Adobe Acrobat, Microsoft Word, or Google Docs, which often have built-in PDF creation tools. Print to PDF: Many applications and operating systems have a "Print to PDF" option that allows you to save a document as a PDF file instead of printing it on paper. Online converters: There are various online tools that can convert different file types to PDF. **How do I edit a Question 1 November 2014 Grade 11 Maths Paper2 PDF?** Editing a PDF can be done with software like Adobe Acrobat, which allows direct editing of text, images, and other elements within the PDF. Some free tools, like PDFescape or Smallpdf, also offer basic editing capabilities. **How do I convert a Question 1 November 2014 Grade 11 Maths Paper2 PDF to another file format?** There are multiple ways to convert a PDF to another format: Use online converters like Smallpdf, Zamzar, or Adobe Acrobats export feature to convert PDFs to formats like Word, Excel, JPEG, etc. Software like Adobe Acrobat, Microsoft Word, or other PDF editors may have options to export or save PDFs in different formats. **How do I password-protect a Question 1 November 2014 Grade 11 Maths Paper2 PDF?** Most PDF editing software allows you to add password protection. In Adobe Acrobat, for instance, you can go to "File" -> "Properties" -> "Security" to set a password to restrict access or editing capabilities. Are there any free alternatives to Adobe Acrobat for working with PDFs? Yes, there are many free alternatives for working with PDFs, such as: LibreOffice: Offers PDF editing features. PDFsam: Allows splitting, merging, and editing PDFs. Foxit Reader: Provides basic PDF viewing and editing capabilities. How do I compress a PDF file? You can use online tools like Smallpdf, ILovePDF, or desktop software like Adobe Acrobat to compress PDF files without significant quality loss. Compression reduces the file size, making it easier to share and download. Can I fill out forms in a PDF file? Yes, most PDF viewers/editors like Adobe Acrobat, Preview (on Mac), or various online tools allow you to fill out forms in PDF files by selecting text fields and entering information. Are there any restrictions when working with PDFs? Some PDFs might have restrictions set by their creator, such as password protection, editing restrictions, or print restrictions. Breaking these restrictions might require specific software or tools, which may or may not be legal depending on the circumstances and local laws.

Find Question 1 November 2014 Grade 11 Maths Paper2 :

physics grade 1 november 2013 paper gauteng

pi60print controller user manual

piaggio x8 workshop manual

piaggio service manual

piaggio x9 user manual

physics scheme of work for ss2 emerald high school

physics knight student work answers

physics laboratory manual loyd third edition

physics walker 4th edition solutions chapter1

physics igcse alternative to practical past papers

picbasic pro stepper motor

physics resistance is a current and resistance

physics grade 1 november exam 2014 scope

~~piano arrangement of great is thy faithfulness~~

physics staar may 2013 answers

Question 1 November 2014 Grade 11 Maths Paper2 :

surge definition meaning merriam webster - May 10 2023

web the meaning of surge is to rise and fall actively toss how to use surge in a sentence

tureng surge türkçe İngilizce sözlük - Sep 14 2023

web İngilizce türkçe online sözlük tureng kelime ve terimleri çevir ve farklı aksanlarda sesli dinleme surge akın insanlar

hayvanlar için surge protector ırak a ek asker gönderilmesine engel olan kimse ne demek

surge **cambridge dictionary** - Aug 13 2023

web surge

surge - Jul 12 2023

web ios 9 surge surge pac

socks5 000000 0000000000 0000

surge **surge** - Apr 09 2023

web ██████████ ██████surge██████ surge██████ surge███ surge█████ surge█████ surge██████████

surge definition in the cambridge english dictionary - Jan 06 2023

web surge meaning 1 a sudden and great increase 2 a sudden and great movement forward 3 a sudden increase of learn more

web gustavo fogel on manual istorie clasa 11 humanitas pdf 24 exclusive 4c20cafejd jun 10 2020 download as pdf or read online from scribd flag for liamugoti 1 manual istorie clasa 11 humanitas pdf 24 download bit ly manual istorie clasa 11 humanitas manual geografie clasa a xi a editura humanitas

istorie clasa a xi a editura humanitas sorin oane libraria clb - May 12 2023

web comanda de la libraria clb istorie clasa a xi a editura humanitas de sorin oane editura humanitas s a livrare rapida in toata tara

manual istorie clasa 11 humanitas pdf 24 top soundcloud - Sep 04 2022

web mar 29 2023 stream manual istorie clasa 11 humanitas pdf 24 top by lauren miller on desktop and mobile play over 320 million tracks for free on soundcloud soundcloud

istorie humanitas - Nov 06 2022

web used by facebook to deliver a series of advertisement products such as real time bidding from third party advertisers tries to estimate the users bandwidth on pages with integrated youtube videos registers a unique id to keep statistics of what videos from youtube the

manual istorie clasa 11 humanitas pdf download better - Jan 08 2023

web jun 2 2023 play manual istorie clasa 11 humanitas pdf download better from miguel play audiobooks and excerpts on soundcloud desktop and mobile

manual istorie clasa 11 humanitas pdf download new - Jun 01 2022

web mar 19 2023 manual istorie clasa 11 humanitas pdf download new click here picfs com 2t55vm

istorie manual xi humanitas 50storiesfortomorrow ilfu com - Oct 05 2022

web istorie manual xi humanitas book review unveiling the power of words in a world driven by information and connectivity the power of words has are more evident than ever they have the ability to inspire provoke and ignite change

pdf istorie manual xi humanitas pdf blueskywildlife com - Jul 02 2022

web aug 1 2023 this istorie manual xi humanitas pdf but end up in infectious downloads rather than enjoying a good book with a cup of tea in the afternoon instead they are facing with some malicious bugs inside their laptop istorie manual xi humanitas pdf is available in our digital library an online access to it is set as public so you can download it

fileshare ro manual istorie clasa a xi a pdf pdf scribd - Jun 13 2023

web acest proiect f i r i precedent in istoria europeii depinde in ultimi instanfi de capacitatea oamenilor de a urmiri im b unitatea este consecinra istoriei comune a statelor europene preuni un ideal comun

istorie manual xi humanitas help environment harvard edu - Dec 07 2022

web istorie manual xi humanitas yeah reviewing a books istorie manual xi humanitas could amass your near friends listings

this is just one of the solutions for you to be successful as understood carrying out does not suggest the broadcast as skillfully as sharpness of this istorie manual xi humanitas can be taken as capably as picked to act

folmeerapling manual istorie clasa 11 humanitas pdf 24 - Mar 30 2022

web download file pdf manual limba romana clasa 5 editura humanitas manual limba romana clasa 5 editura humanitas manuale clasa 5 manuale pentru coautor la manuale de istorie pentru clasele a ix a corint 2000 a x a corint 2004 2005 istorie manual pentru clasa a xi a alexandru barnea coord

istorie manual xi humanitas home rightster com - Apr 30 2022

web geografie xi humanitas rutrackertreasure blog istorie manual xi humanitas 104 236 110 123 istorie manual xi humanitas samara hotel com istorie manual xi humanitas 118 61 199 35 bc istorie manual xi humanitas jennyk de istorie manual xi humanitas cetara de istorie manual xi humanitas nhvolk de manual istorie clasa a xi a

milli tarihin İnşası - Dec 27 2021

web ta rih çi ki ta be vi sa hi bi ve ge nel ya yın yö net me ni ne cip aza koğ lu düzelti hadiye yılmaz ka pak ta sa rım kolektif atölye say fa ta sa rım gü ler kı zı lel ma bi rin ci bas kı eylül 2011 İs tan bul bo yut lar 13 5 x 21 cm say fa sa yısı 328 isbn 978 605 4534 03 6

istorie manual xi humanitas catalogo corello com br - Feb 26 2022

web 4 istorie manual xi humanitas 2021 01 30 them from unexpected sources often unknown to the public accompanied by detailed captions that complement the information provided in the text itself together the story and illustrations intertwine to form a new enhanced historical account and

free pdf download istorie manual xi humanitas pdf - Apr 11 2023

web mar 20 2023 istorie manual xi humanitas pdf eventually you will unquestionably discover a supplementary experience and capability by publicului larg interesat de istoria și sociologia religiilor holocaust education e doyle stevick 2017 10 02 holocaust education promise practice power and potential provides timely studies of some

centrifuge 5804 5804 r 5810 5810 r national institute of - Jul 14 2023

web centrifuge 5804 5804 r 5810 5810 r operating manual 1 user instructions 1 user instructions 1 1 using this manual read this operating manual completely before using

eppendorf 5810 r centrifuge manual page 67 - Jan 28 2022

web the maximum service life of the rotor has been reached the warning is displayed after 98 000 99 000 and 99 600 runs 3 times after each run after 100 000 runs it is

eppendorf 5810 r centrifuge user manual 95 pages also for - Jun 01 2022

web eppendorf 5810r specifications eppendorf centrifuge 5810r service manual centrifuge services premiumcare service

agreement multipurpose centrifuges with

service manual eppendorf centrifuge 5810 5810 r - Feb 09 2023

web mar 12 2021 community forums for eppendorf centrifuge 5810 5810 r relating to service manual on medwrench page 1

eppendorf 5810r service manual by tm2mail292 issuu - Oct 05 2022

web this sign is found on your centrifuge and on several pages in the operating manual texts labeled with this sign contain safety notes read these safety precautions before using

eppendorf centrifuge 5810 5810 r eppendorf - Aug 03 2022

web jun 30 2023 fortunately you can download the eppendorf 5810r service manual online in a compressed file format called rar rar files are smaller than other formats which

service manuals eppendorf 5810 5810r labwrench - Dec 07 2022

web i need the service manuals for eppendorf centrifuga model 8510 8510r the problem is that an error 3 message appears on the lcd screen when the start button is pressed

centrifuge 5804 5804 r 5810 5810 r operating manual - May 12 2023

web 1 1 using this manual please read this operating manual completely before using the device for the first time also observe the instructions for use enclosed with the

how to download the eppendorf 5810r service manual online - Jul 02 2022

web eppendorf 5810 r centrifuge user manual 95 pages also for 5810 centrifuge 5804 r centrifuge 5804 centrifuge manual

centrifuge 5804 5804 r centrifuge 5810 5810 r eppendorf - Nov 25 2021

web dec 27 2017 5810r service manual pdf eppendorf 5810r service manual pdf get instant access for eppendorf 5810r service manual pdf simply follow the link provided

titel rueck klapp emory - Sep 04 2022

web eppendorf centrifuge 5810 5810 r eppendorf centrifugationoperating manual pdf medwrench

5810r service manual eppendorf 5810 5810r labwrench - Jun 13 2023

web jun 16 2015 5810r service manual i downloaded the service manual for the 5804 5810 centrifuge from this site unfortunately the quality is not so good so i cannot read most of

eppendorf 5810 r user manual manualmachine com - Feb 26 2022

web this manual is related to the following products 5810 centrifuge 5804 r centrifuge 5804 centrifuge

service manual eppendorf 5810 5810r labwrench - Mar 10 2023

web service manual i have seen references to a service manual or manuals being available on this site but do not find any such thing i have a simple enough question maybe

centrifuge 5810 5810 r benchtop centrifuge eppendorf - Apr 11 2023

web the high speed centrifuge 5810 5810 r is one of the smallest 3 l benchtop centrifuge currently available it is the workhorse for medium to high throughput laboratories and

centrifuge 5804 5804 r 5810 5810 r operating manual - Sep 23 2021

centrifuge 5804 5804 r centrifuge 5810 5810 r - Aug 15 2023

web the versatile centrifuge has a capacity of maximum 4 250 ml centrifuge 5804 5804 r or 4 750 ml centrifuge 5810 5810 r and reaches a maximum of 20 913 g 14 000 rpm

eppendorf 5810r service manual by c330 issuu - Oct 25 2021

web eppendorf 5810r centrifuge manual pdf free download as pdf file pdf text file txt or read online for free 65 centrifuge 5804 5804 r 5810 5810 r operating

eppendorf 5810 5810r community manuals and - Nov 06 2022

web jun 6 2023 unparalleled versatility featuring powerful maintenance free motors these models accommodate a variety of rotors to meet your application needs they are three

eppendorf centrifuge 5810r service manual downlofile - Apr 30 2022

web eppendorf useppendorf 5810r service manual ppt get instant access for eppendorf 5810r service manual ppt simply follow the link provided above and you can directly

eppendorf centrifuge 5810 5810 r community manuals - Jan 08 2023

web description unparalleled versatility featuring powerful maintenance free motors these models accommodate a variety of rotors to meet your application needs they are three

operating manual eppendorf 5810 r centrifuge user manual - Dec 27 2021

web operating instructions centrifuge 5804 5804 r centrifuge 5810 5810 r english en 1 operating instructions 1 1 using this manual read this operating manual completely

eppendorf 5810r service manual old vulkk com - Mar 30 2022

web all centrifuges in these series have 35 program spaces for user defined settings and 10 different acceleration and braking ramps adapter specific manual radius adjustment