

Recommended Practice for Design and Installation of Offshore Production Platform Piping Systems

API RECOMMENDED PRACTICE 14E (RP 14E)
FIFTH EDITION, OCTOBER 1, 1991

American Petroleum Institute
1220 L Street, Northwest
Washington, DC 20005



Api Rp 14e

WJ Hussar



Api Rp 14e:

Whispering the Techniques of Language: An Emotional Quest through **Api Rp 14e**

In a digitally-driven world where displays reign great and immediate communication drowns out the subtleties of language, the profound secrets and psychological nuances concealed within words frequently go unheard. However, located within the pages of **Api Rp 14e** a interesting literary value blinking with fresh emotions, lies an exceptional quest waiting to be undertaken. Written by an experienced wordsmith, this marvelous opus encourages viewers on an introspective journey, softly unraveling the veiled truths and profound affect resonating within ab muscles fabric of each word. Within the psychological depths with this poignant review, we will embark upon a genuine exploration of the book is key subjects, dissect its charming publishing type, and succumb to the effective resonance it evokes strong within the recesses of readers hearts.

<https://py.bijouxmedusa.com/About/book-search/fetch.php/monetization%20apps%20united%20states%2012%20945%20blog%20monetization%20apps%20for.pdf>

Table of Contents Api Rp 14e

1. Understanding the eBook Api Rp 14e
 - The Rise of Digital Reading Api Rp 14e
 - Advantages of eBooks Over Traditional Books
2. Identifying Api Rp 14e
 - 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 Api Rp 14e
 - User-Friendly Interface
4. Exploring eBook Recommendations from Api Rp 14e

- Personalized Recommendations
- Api Rp 14e User Reviews and Ratings
- Api Rp 14e and Bestseller Lists
- 5. Accessing Api Rp 14e Free and Paid eBooks
 - Api Rp 14e Public Domain eBooks
 - Api Rp 14e eBook Subscription Services
 - Api Rp 14e Budget-Friendly Options
- 6. Navigating Api Rp 14e eBook Formats
 - ePub, PDF, MOBI, and More
 - Api Rp 14e Compatibility with Devices
 - Api Rp 14e Enhanced eBook Features
- 7. Enhancing Your Reading Experience
 - Adjustable Fonts and Text Sizes of Api Rp 14e
 - Highlighting and Note-Taking Api Rp 14e
 - Interactive Elements Api Rp 14e
- 8. Staying Engaged with Api Rp 14e
 - Joining Online Reading Communities
 - Participating in Virtual Book Clubs
 - Following Authors and Publishers Api Rp 14e
- 9. Balancing eBooks and Physical Books Api Rp 14e
 - Benefits of a Digital Library
 - Creating a Diverse Reading Collection Api Rp 14e
- 10. Overcoming Reading Challenges
 - Dealing with Digital Eye Strain
 - Minimizing Distractions
 - Managing Screen Time
- 11. Cultivating a Reading Routine Api Rp 14e
 - Setting Reading Goals Api Rp 14e
 - Carving Out Dedicated Reading Time
- 12. Sourcing Reliable Information of Api Rp 14e

- Fact-Checking eBook Content of Api Rp 14e
 - 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

Api Rp 14e Introduction

In today's digital age, the availability of Api Rp 14e 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 Api Rp 14e books and manuals for download, along with some popular platforms that offer these resources. One of the significant advantages of Api Rp 14e 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 Api Rp 14e 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, Api Rp 14e 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 Api Rp 14e 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 Api Rp 14e 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, Api Rp 14e 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 Api Rp 14e books and manuals for download and embark on your journey of knowledge?

FAQs About Api Rp 14e 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 webbased 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. Api Rp 14e is one of the best book in our library for free trial. We provide copy of Api Rp 14e in digital format, so the resources that you find are reliable. There are also many Ebooks of related with Api Rp 14e. Where to download Api Rp 14e online for free? Are you looking for Api Rp 14e PDF? This is definitely going to save you time and cash in something you should think about. If you trying to find then search around for online. Without a doubt there are numerous these available and many of them have the freedom. However

without doubt you receive whatever you purchase. An alternate way to get ideas is always to check another Api Rp 14e. This method for see exactly what may be included and adopt these ideas to your book. This site will almost certainly help you save time and effort, money and stress. If you are looking for free books then you really should consider finding to assist you try this. Several of Api Rp 14e are for sale to free while some are payable. If you arent sure if the books you would like to download works with for usage along with your computer, it is possible to download free trials. The free guides make it easy for someone to free access online library for download books to your device. You can get free download on free trial for lots of books categories. Our library is the biggest of these that have literally hundreds of thousands of different products categories represented. You will also see that there are specific sites catered to different product types or categories, brands or niches related with Api Rp 14e. So depending on what exactly you are searching, you will be able to choose e books to suit your own need. Need to access completely for Campbell Biology Seventh Edition book? Access Ebook without any digging. And by having access to our ebook online or by storing it on your computer, you have convenient answers with Api Rp 14e To get started finding Api Rp 14e, you are right to find our website which has a comprehensive collection of books online. Our library is the biggest of these that have literally hundreds of thousands of different products represented. You will also see that there are specific sites catered to different categories or niches related with Api Rp 14e So depending on what exactly you are searching, you will be able to choose ebook to suit your own need. Thank you for reading Api Rp 14e. Maybe you have knowledge that, people have search numerous times for their favorite readings like this Api Rp 14e, but end up in harmful downloads. Rather than reading a good book with a cup of coffee in the afternoon, instead they juggled with some harmful bugs inside their laptop. Api Rp 14e is available in our book collection an online access to it is set as public so you can download it instantly. Our digital library spans in multiple locations, allowing you to get the most less latency time to download any of our books like this one. Merely said, Api Rp 14e is universally compatible with any devices to read.

Find Api Rp 14e :

[monetization apps United States 12-945](#) [blog monetization apps for America 12-2434](#) [sustainable living apps America 12-966](#) [sustainable 12-889](#) [passive income ideas guide United States 12-1338](#) [passive income creators 12-2570](#) **side hustles software for entrepreneurs 12-386** [side 12-1687](#) [machine learning basics examples for creators 12-291](#) [machine United States 12-1865](#) [mobile app ideas case study for entrepreneurs planning ideas America 12-385](#) **retirement planning ideas USA 12-823** [routines trends for creators 12-836](#) [fitness routines trends for](#)

strategies for startups 12-694 real estate investing tips for creators
 America 12-2533 sustainable living trends USA 12-2376 sustainable living
 trends United States 12-1317 interview tips trends for creators 12-1025
funding tutorial for small business 12-2386 startup funding tutorial for
 12-277 AI marketing comparison for entrepreneurs 12-2073 AI marketing
 hustles tutorial United States 12-986 small business ideas apps for
 basics step by step America 12-681 machine learning basics step by step

Api Rp 14e :

style beauty lesson in 10 minutes japanese editio copy blog - Jan 26 2022
 web may 30 2023 as this style beauty lesson in 10 minutes japanese editio pdf it ends in the works brute one of the favored
 ebook style beauty lesson in 10 minutes
style beauty lesson in 10 minutes japanese editio pdf free - Dec 05 2022
 web faq this course is for students with no prior knowledge in hairdressing and would like to gain entry into the hairdressing
 industry haircut is an essential and most popular service
 courses beauty recipe aesthetics academy - Feb 07 2023
 web keenness of this style beauty lesson in 10 minutes japanese editio pdf can be taken as capably as picked to act style
 beauty lesson in 10 minutes japanese edition web 10
style beauty lesson in 10 minutes japanese editio pdf anna - Apr 09 2023
 web apr 13 2022 10 minute naginata sharpening to learn how to get your hard formula eyebrow pencil sharpened to the
 iconic japanese naginata sword shape free 10
13 makeup classes in singapore you can attend some - Mar 08 2023
 web beauty recipe academy offers sfc eligible more than 30 beauty courses local singaporeans both online live trainings are
 available whether you are someone
 style beauty lesson in 10 minutes japanese editio pdf - Mar 28 2022
 web beauty lesson in 10 minutes japanese editio pdf below fritz henle roy flukinger 2009 02 01 beyond his mastery of the
 craft however henle was driven by a lifelong
 style beauty lesson in 10 minutes japanese editio pdf copy - Oct 03 2022
 web jun 3 2023 style beauty lesson in 10 minutes japanese editio pdf web style beauty lesson in 10 minutes japanese edition
 by yamamoto kazumi tomo minutes

style beauty lesson in 10 minutes japanese edition by - Sep 14 2023

web mar 4 2023 *style beauty lesson in 10 minutes japanese editio pdf* is welcoming in our digital library an online entry to it is set as public appropriately you can download it instantly

style beauty lesson in 10 minutes japanese edition by - Nov 23 2021

style beauty lesson in 10 minutes japanese editio pdf book - Dec 25 2021

web place merely said the *style beauty lesson in 10 minutes japanese edition by yamamoto kazumi tomo* is globally consistent with any devices to browse if you want

style beauty lesson in 10 minutes japanese editio pdf pdf - May 30 2022

web list of all in beautician at singapore geebee education is india s most trusted overseas education consultant we guide for study abroad overseas education options for

list of all courses in beautician at singapore geebee education - Apr 28 2022

web apr 28 2023 *style beauty lesson in 10 minutes japanese editio pdf* when people should go to the ebook stores search launch by shop shelf by shelf it is in reality

style beauty lesson in 10 minutes japanese editio pdf 2023 - Jun 30 2022

web *style beauty lesson in 10 minutes japanese editio pdf* reviewing *style beauty lesson in 10 minutes japanese editio pdf* unlocking the spellbinding force of linguistics in a

style beauty lesson in 10 minutes japanese editio 2022 - Jun 11 2023

web mar 24 2023 kindly say the *style beauty lesson in 10 minutes japanese editio* is universally compatible with any devices to read literary digest 1922 american

style beauty lesson in 10 minutes japanese edition - Oct 15 2023

web *style beauty lesson in 10 minutes japanese edition by yamamoto kazumi tomo style beauty lesson in 10 minutes japanese edition by yamamoto kazumi tomo* 26

style beauty lesson in 10 minutes japanese editio pdf - Jan 06 2023

web *style beauty lesson in 10 minutes japanese editio pdf* upload jason e williamson 1 3 downloaded from yearbook ladieseuropeantour com on october 8 2023 by jason e

ladies basic hair cut make up and beauty courses in - Nov 04 2022

web jun 9 2023 *style beauty lesson in 10 minutes japanese editio pdf* web *style beauty lesson in 10 minutes japanese edition by yamamoto kazumi tomo lesson*

style beauty lesson in 10 minutes japanese editio pdf - Sep 02 2022

home zedfoto com - May 01 2022

web great gallery so if you re ever in middleburg please check it out welcome to my site i m always updating things here with fresh new pics from my latest shoots stop by often also friend me on facebook at nick kozel to see my very popular foto of the day zedfoto

zero to booked take your portrait and wedding pho pdf copy - Apr 12 2023

web zero to booked take your portrait and wedding pho pdf is available in our digital library an online access to it is set as public so you can get it instantly our books collection

zedphoto temporary web site for zedphoto - Jan 29 2022

web zedphoto temporary web site for zedphoto skip to content due to recent malware attack no client data was compromised i have decided to completely remove my lovely old website and build a new slicker and more secure one thanks for your patience and please contact me at alan zedphoto com or call direct on 07974937204

zero to booked take your portrait and wedding pho - Jul 15 2023

web zero to booked take your portrait and wedding pho less than zero next generation level 1 teacher s resource book with class audio cds 3 zero to one zero the hero the big zero time zero how to write your first book ever start from zero time next zero waste home it s not you it s him die with zero the power of zero revised and

zero to booked take your portrait and wedding pho full pdf - Nov 07 2022

web zero to booked take your portrait and wedding pho full pdf analytics budgetbakers com author holden taniya created date 9 7 2023 4 57 12 am

zero to booked take your portrait and wedding pho - Dec 08 2022

web site to start getting this info acquire the zero to booked take your portrait and wedding pho associate that we meet the expense of here and check out the link you could purchase lead zero to booked take your portrait and wedding pho or get it as soon as feasible you could quickly download this zero to booked take your portrait and wedding

zero to booked take your portrait and wedding pho 2023 - Jan 09 2023

web the completely new edition of professional techniques for the wedding photographer is the picture taker s bible to lighting posing and taking gorgeous photographs that will increase sales and profits the guide is organized as a thorough and detailed script for a typical wedding day over 150 stunning photographs take the reader step by

free zero to ed take your portrait and wedding pho - Feb 10 2023

web mar 24 2023 right here we have countless book zero to ed take your portrait and wedding pho and collections to check out we additionally meet the expense of variant types and then type of the books to browse

magic of zero zero photography tv episode 2022 imdb - Mar 31 2022

web aug 14 2022 zero photography directed by tee sintanaparadee with pansa vosbein pattranite limpatiyakorn sureeyaret yakaret phatchatorn tanawat ink and pa of bad buddy have been together for a long time and pa no longer wants to be photographed by her girlfriend somehow pa ends up time travelling back to high school when ink

[zero to ed take your portrait and wedding pho full pdf](#) - Aug 04 2022

web mar 24 2023 a couple s dream wedding and this complete resource is an essential addition to any aspiring or current wedding photographer s shelf from brightly lit outdoor weddings to poorly lit evening

zero to booked take your portrait and wedding pho - Mar 11 2023

web aug 8 2023 your portrait and wedding pho is universally compatible taking into consideration any devices to read how to draw flowers barbara soloff levy 2001 01 09 offers step by step instructions for drawing more than twenty varieties of flowers including jack in the pulpit iris and bird of paradise

niko zed tattoo portfolio facebook - Dec 28 2021

web niko zed tattoo portfolio 12 617 likes 44 talking about this tattoo artist lakimii stuttgart instagram niko zed tattoo instagram com niko zed tattoo

zero to booked take your portrait and wedding pho pdf - Aug 16 2023

web aug 14 2023 zero to booked take your portrait and wedding pho 1 7 downloaded from uniport edu ng on august 14 2023 by guest zero to booked take your portrait and wedding pho as recognized adventure as without difficulty as experience virtually lesson amusement as skillfully as

zero to booked take your portrait and wedding pho bpp - Jun 14 2023

web portrait session we direct and create moments that last a lifetime i d like to share that you can create world class images in your own hometown you will learn how to create images and compete with the big shot wedding photographers who travel the world and shoot weddings in places like italy france and spain popular photography 1990 12

zero to booked take your portrait and wedding pho book - Jul 03 2022

web we give zero to booked take your portrait and wedding pho and numerous ebook collections from fictions to scientific research in any way in the course of them is this zero to booked take your portrait and wedding pho that can be your partner step by step wedding photography damon tucci 2008 09 01

zero to booked take your portrait and wedding pho scott - Sep 05 2022

web zero to booked nigel merrick 2017 08 28 are you a portrait or wedding photographer if so you know that getting your name out there and finding good clients is a lot more difficult than you first thought the internet seems perfect for marketing your photography but most portrait and wedding photographers struggle like crazy to find enough

rational expressions calculator symbolab - Nov 07 2022

web what is a rational expression in math a rational expression is an expression that is the ratio of two polynomial expressions how do you identify rational expressions to identify a rational expression factor the numerator and denominator into their prime factors and cancel out any common factors that you find

prentice hall mathematics algebra 1 answer key pdf fill online - Feb 27 2022

web to download free prentice hall algebra 1 geometry and apr 14 2010 pre algebra all in one student workbook version b randall i realidades answers of pdf doc realidades 1 practice workbook answer key 4 this pdf book include practice workbook prentice hall realidades 1 answers document to download free prentice hall 3

9 4 simplify complex rational expressions mathematics - Jul 03 2022

web aug 24 2020 simplify the complex rational expression by writing it as division solution rewrite the complex fraction as division rewrite as the product of first times the reciprocal of the second rewrite as the product of first times the reciprocal of the second rewrite as the product of first times the reciprocal of the second factor

prentice hall algebra algebra textbook brightstorm - Mar 11 2023

web chapter 2 rational numbers chapter 3 solving equations chapter 4 solving inequalities chapter 5 graphs and functions chapter 6 linear equations and their graphs chapter 7 systems of equations and inequalities chapter 8 exponents and exponential functions chapter 9 polynomials and factoring

prentice hall algebra 1 static v2 connexus pearson com - Aug 16 2023

web to simplify a rational expression divide out common factors from the numerator and denominator like a numerical fraction a rational expression is undefined when the denominator is 0 a value of a variable for which a rational expression is undefined is an excluded value

prentice hall algebra 1 pearson plc - Jul 15 2023

web lesson 1 7 simplifying expressions simplify each expression $3x^2 - 4x - 2x^2 + 5x - 3x + 2 - 4x + 2x + 2 - 5x + 2d - 7 - 5d - 8 - 2d - 7 - 5d - 8 - 3 - 2r - 4r - 2 - 3 - 2r - 4r - 2 - 7r - 4r - 2 - 2m - 1 - 9 - 4m - 3 - 2m - 1 - 9 - 4m - 3 - 6a - 3a^2 - 2a - 3a^2 - 6a - 3a - 2 - 2a - 3a - 2 - s - 4 - s^2 - 2 - 8s - s - 4 - s - 2 - 2 - 8s$

alg 1 simplifying rational expressions by vicki hines tpt - Dec 08 2022

web this powerpoint lesson coordinates with section 11.1 of the prentice hall ca algebra 1 textbook i created it for my algebra 1 classes to show how to simplify algebraic fractions it is the first lesson i use to teach rational expressions there is a video in this lesson which makes it perfect wh

prentice hall mathematics algebra 1 answers algebra - May 01 2022

web my algebra teacher gave us prentice hall mathematics algebra 1 answers homework today normally i am good at matrices but somehow i am just stuck on this one assignment i have to turn it in by this friday but it looks like i will not be able to complete it in time so i thought of coming online to find assistance

pre algebra book prentice hall mathematics answers algebra - Jun 02 2022

web multiplying and dividing rational expressions intermediate algebra worksheet factoring binomials finite mathematics pencil paper homework list simplify enter expression e g $x^2 - 5x + 6$ sample problem factor i am taking an online pre algebra book prentice hall mathematics answers course for me it s a bit difficult to study

prentice hall algebra 1 pearson plc - Dec 28 2021

web 11 1 simplifying rational expressions 11 2 and 11 3 multiplying and dividing rational expressions and dividing polynomials 11 4 adding and subtracting rational expressions 11 5 solving rational equations 11 6 inverse variation 11 7 graphing rational functions

prentice hall algebra 1 algebra expression com - Aug 04 2022

web right from prentice hall algebra 1 to trinomials we have got every aspect included come to algebra expression com and understand subtracting rational expressions mixed numbers and many other math topics

prentice hall algebra 1 with online resources lumos learning - May 13 2023

web sep 16 2023 prentice hall algebra 1 is a educational book by pearson prentice hall student edition this page not only allows students and teachers to get information about the book prentice hall algebra 1 but also find engaging sample questions videos pins worksheets apps related to the following topics table of contents ch 1

7 1 simplifying rational expressions mathematics libretxts - Jun 14 2023

web oct 6 2021 simplify rational expressions simplify expressions with opposite binomial factors simplify and evaluate rational functions rational expressions evaluation and restrictions a rational number or fraction $\frac{a}{b}$ is a real number defined as a quotient of two integers a and b where $b \neq 0$

rational expressions algebra 1 mathplanet - Jan 29 2022

web algebra 1 radical expressions overview the graph of a radical function simplify radical expressions radical equations the pythagorean theorem the distance and midpoint formulas

prentice hall algebra 1 answers rational equations com - Oct 06 2022

web right from prentice hall algebra 1 answers to rational expressions we have every part covered come to rational equations com and learn equivalent fractions trinomials and a wide range of other math subjects

rational expressions equations functions khan academy - Apr 12 2023

web this topic covers simplifying rational expressions multiplying dividing adding subtracting rational expressions rational equations graphing rational functions including horizontal vertical asymptotes modeling with rational functions rational inequalities partial fraction expansion

algebra 1 prentice hall simplify rational expressions darelova - Mar 31 2022

web algebra 1 prentice hall simplify rational expressions the quotient rule can be used to simplify square roots of quotients this lesson will define the quotient rule and show you how it is used

algebra1prenticehallsimplifyrationalexpressions john tobey jr - Sep 05 2022

web polynomials factoring polynomials rational expressions for all readers interested in algebra elementary algebra for college students prentice hall staff 2000 prentice hall algebra 1 jan fair 1992 prentice hall math algebra 2 study guide and practice workbook 2004c prentice hall staff 3 2003 12

7 1 simplify rational expressions mathematics libretxts - Jan 09 2023

web feb 12 2022 openstax table of contents determine the values for which a rational expression is undefined definition determine the values for which a rational expression is undefined example 7 1 1 7 1 1 try it 7 1 2 7 1 2 try it 7 1 3 7 1 3 evaluate rational expressions example 7 1 4 7 1 4 try it 7 1 5 7 1 5

simplify rational expression algebra 1 rational expressions - Feb 10 2023

web an algebraic expression where both the numerator and the denominator are polynomials $e g \frac{x^3}{x}$ is called a rational expression since the denominator can't be zero there are values of x which are excluded from the rational expression the expression above has an excluded value of zero