

Name: \_\_\_\_\_ No. \_\_\_ Grade 9/\_\_\_

# LAWS OF EXPONENTS

# Simplify.

$$1.4x^3 \cdot 2x^3 = 8x^6$$

$$2. x^5 \cdot x^3 = x^8$$

$$3.\ 2x^3 \cdot 2x^2 = 4x^5$$

$$4.\frac{6^5}{6^3} = 36$$

5. 
$$\frac{x^4}{x^7} = \frac{1}{x^3}$$

$$6.8^{\circ} = 1$$

$$7. \, \frac{6x^7}{2x^4} = 3x^3$$

8. 
$$\frac{x^2y^5}{xy^4} = xy$$

0,000,000,000,000,000

# **Exponent Grade 9 Assignments**

Michigan. Department of Public Instruction



Getting the books **Exponent Grade 9 Assignments** now is not type of challenging means. You could not single-handedly going in imitation of books deposit or library or borrowing from your connections to admission them. This is an unquestionably simple means to specifically get lead by on-line. This online message Exponent Grade 9 Assignments can be one of the options to accompany you like having further time.

It will not waste your time. allow me, the e-book will enormously atmosphere you extra matter to read. Just invest little times to entry this on-line notice **Exponent Grade 9 Assignments** as with ease as evaluation them wherever you are now.

https://staging.conocer.cide.edu/book/browse/default.aspx/Gulfstream%20G200%20Airplane%20Flight%20Manual.pdf

## **Table of Contents Exponent Grade 9 Assignments**

- 1. Understanding the eBook Exponent Grade 9 Assignments
  - The Rise of Digital Reading Exponent Grade 9 Assignments
  - Advantages of eBooks Over Traditional Books
- 2. Identifying Exponent Grade 9 Assignments
  - 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 Exponent Grade 9 Assignments
  - User-Friendly Interface
- 4. Exploring eBook Recommendations from Exponent Grade 9 Assignments
  - Personalized Recommendations
  - Exponent Grade 9 Assignments User Reviews and Ratings
  - Exponent Grade 9 Assignments and Bestseller Lists
- 5. Accessing Exponent Grade 9 Assignments Free and Paid eBooks

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

## **Exponent Grade 9 Assignments 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 Exponent Grade 9 Assignments 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 Exponent Grade 9 Assignments 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 Exponent Grade 9 Assignments free PDF files is convenient, its 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 its essential to be cautious and verify the authenticity of the source before downloading Exponent Grade 9 Assignments. In conclusion, the internet offers numerous platforms and websites that allow users to download free PDF files legally. Whether its 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 Exponent Grade 9 Assignments any PDF files. With these platforms, the world of PDF downloads is just a click away.

#### **FAQs About Exponent Grade 9 Assignments 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, guizzes, and activities, enhancing the reader engagement and providing a more immersive learning experience. Exponent Grade 9 Assignments is one of the best book in our library for free trial. We provide copy of Exponent Grade 9 Assignments in digital format, so the resources that you find are reliable. There are also many Ebooks of related with Exponent Grade 9 Assignments. Where to download Exponent Grade 9 Assignments online for free? Are you looking for Exponent Grade 9 Assignments 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 Exponent Grade 9 Assignments. 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 Exponent Grade 9 Assignments 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 quides 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 Exponent Grade 9 Assignments. 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 Exponent Grade 9 Assignments To get started finding Exponent Grade 9 Assignments, 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 Exponent Grade 9 Assignments So depending on what exactly you are searching, you will be able tochoose ebook to suit your own need. Thank you for reading Exponent Grade 9 Assignments. Maybe you have knowledge that, people have search numerous times for their favorite readings like this Exponent Grade 9 Assignments, 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. Exponent Grade 9 Assignments 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, Exponent Grade 9 Assignments is universally compatible with any devices to read.

#### Find Exponent Grade 9 Assignments:

guided aggressors on the march answers
guided practice activities 2b 1 answers pg 77
guide to the well behaved parrot
guide to using endnote
guided cycling tours denmark
guided reading activity world history
guitar amp repair inland empire
guided reading activity 7 4
guitar hero world tour achievement guide
guided activity 4 industrial revolution answers
guided reading activity 23 4 lhs support

guided study guide economic guided reading chapter 1section answers war at home guidelines to hiring jesus christ superstar 22

## **Exponent Grade 9 Assignments:**

a boy after god s own heart your awesome adventure with jesus - Jan 28 2023

web boy after god s own heart a your awesome adventure with jesus ebook jim george 9780736945035 christianbook com by jim george harvest house

## a boy after god s own heart your awesome adventure with - May 20 2022

web paperback 6 49 16 used from 0 79 4 new from 6 49 boys have a lot competing for their attention and peer pressure can be tremendous making it a challenge to

a boy after god s own heart your awesome adventure with - Dec 15 2021

a boy after god s own heart your awesome adventure with - Jun 20 2022

web sep 1 2012 a boy after god s own heart on apple books your awesome adventure with jesus jim george 4 0 1 rating 11 99 publisher description boys have a lot

## product reviews a boy after god s own heart your awesome - Jul 22 2022

web boys have a lot competing for their attention and peer pressure can be tremendous making it a challenge to encourage them toward the things of god and living the

a boy after god s own heart your awesome adventure with jesus - Nov 13 2021

#### a boy after god s own heart your awesome adventure with jesus - Jan 16 2022

web boys will learn the value of honoring and respecting their parents the keys to making right choices and decisions how to choose the best kinds of friends and be a good

a boy after god s own heart your awesome adventure - Oct 05 2023

web sep 1 2012 a boy after god s own heart your awesome adventure with jesus george jim on amazon com free shipping on qualifying offers a boy after god s

#### a boy after god s own heart your awesome adventure with jesus - Apr 30 2023

web a boy after god s own heart your awesome adventure with jesus jim george amazon co uk books children s books religions christianity buy new 6 49

## a boy after god s own heart your awesome adventure - Dec 27 2022

web boys will learn the value of honoring and respecting their parents the keys to making right choices and decisions how to choose the best kinds of friends and be a good friend the

a boy after god s own heart your awesome adventure - Aug 03 2023

web your awesome adventure with jesus 18 45 20 50 isbn 9780736945028 format paperback pricing attribute normal page count 112 publication date 1 sep 12

boy after god s own heart a cru media ministry - Jul 02 2023

web title a boy after god s own heart your awesome adventure with jesus author george jim publisher harvest house publishers publication date 2012 isbn

### a boy after god s own heart your awesome adventure with - Oct 25 2022

web a boy after god s own heart your awesome adventure with jesus george jim amazon sg books

## boy after god s own heart a your awesome adventure with - Nov 25 2022

web sep 1 2012 a boy after god s own heart your awesome adventure with jesus jim george harvest house publishers sep 1 2012 juvenile nonfiction 112 pages boys

## a boy after god s own heart your awesome adventure with jesus - Jun 01 2023

web boys have a lot competing for their attention and peer pressure can be tremendous making it a challenge to encourage them toward the things of god and living the

a boy after god s own heart your awesome adventure - Feb 26 2023

web sep 1 2012 a boy after god s own heart your awesome adventure with jesus by jim george 2 5 4 write a review paperback 11 99 paperback 11 99 ebook

## a boy after god s own heart your awesome adventure - Sep 04 2023

web a boy after god s own heart your awesome adventure with jesus by jim george harvest house publishers 2012 paperback 5 out of 5 stars for a boy after god s

a boy after god s own heart your awesome adventure with jesus - Feb 14 2022

web a boy after god s own heart your awesome adventure with jesus by jim george alibris buy a boy after god s own heart your awesome adventure with jesus by

a boy after god s own heart your awesome adventure - Mar 30 2023

web a boy after god s own heart your awesome adventure with jesus ebook written by jim george read this book using google play books app on your pc android ios

a boy after god s own heart your awesome adventure with jesus - Sep 23 2022

web a boy after god s own heart your awesome adventure with jesus jim george harvest house publishers 2012 trade paperback 8 99 retail 12 99 save 31

## a boy after god s own heart your awesome adventure with - Aug 23 2022

web abebooks com a boy after god s own heart your awesome adventure with jesus 9780736945028 by george jim and a great selection of similar new used and

a boy after god s own heart your awesome adventure with jesus - Mar 18 2022

web a boy after god s own heart your awesome adventure with jesus boys have a lot competing for their attention and peer pressure can be tremendous making it a

## a boy after god s own heart apple books - Apr 18 2022

web a boy after god s own heart your awesome adventure with jesus has 112 pages a boy after god s own heart your awesome adventure with jesus the average

## table tennis tips from a world champion pdf - May 25 2022

web table tennis tips from a world champion is a practical training book for successful table tennis the aim is not to copy werner schlager as a player but to use his tips to

## table tennis tips from a world champion google books - Sep 09 2023

web jan 10 2011 table tennis tips from a world champion is a practical training book for successful table tennis the aim is not to copy werner schlager as a player but to

## table tennis tips from a world champion amazon com - Oct 10 2023

web jan 1 2011 table tennis tips from a world champion is a practical training book for successful table tennis the aim is not to copy werner schlager as a player but to use his tips to find your own way to use them successfully numerous picture series explain

guide to the world table tennis championships racket insight - Apr 23 2022

web table tennis tips from a world championbook detailfile size 15260 kb print length 180 pages publisher meyer sport 1 edition january 10 2011

## 10 technical tactical tips for table tennis players - Jun 06 2023

web feb 3 2011 table tennis tips from a world championa is a practical training book for successful table tennis the aim is not to copy werner schlager as a player but to use

table tennis tips from a world champion kindle edition - Apr 11 2021

## table tennis tips from a world champion worldcat org - Jun 25 2022

web the world table tennis championships were introduced in 1926 and they were played once a year up until 1957 all 7 events were played every year the 5 individual events

table tennis tips from a world champion paperback - Nov 30 2022

web table tennis tips from a world championa is a practical training book for successful table tennis the aim is not to copy werner schlager as a player but to use his tips to

table tennis tips from a world champion worldcat org - Mar 03 2023

web table tennis tips from a world champion ebook groß bernd ulrich schlager werner amazon co uk books the tennis escape artists who lifted the trophies the new - Jun 13 2021

web jan 10 2011 buy table tennis tips from a world champion read kindle store reviews amazon com

## table tennis tips from a world champion kindle edition - Jan 01 2023

web sep 26 2016 and if you are looking for some more table tennis tips from professional players and coaches please check out my page 1001 table tennis tips the following

## tips and tricks to become a better player cheats for tennis - Sep 16 2021

web 1 day ago retiring ol reign star and two time women s world cup winner megan rapinoe said on thursday that her final match in saturday s nwsl championship

## 12 physical training tips for table tennis players by - Apr 04 2023

web feb 1 2011 table tennis tips from a world champion is a practical training book for successful table tennis the aim is not to copy werner schlager as a player

pdf table tennis tips from a world champion yumpu - Mar 23 2022

web jan 8 2017 stay as close to the table as you can follow the ball with your eyes all the way to the bat don t expect the trajectory as a certain stroke always should have

## tyson fury was humiliated by francis ngannou a table tennis - Nov 18 2021

web aug 13 2020 choose a defensive character if you are new to tennis world tour choose a defensive character to start goffin is a good choice as he handles like you would think

## world cup 2023 points table england climb up to 7th spot - Oct 18 2021

web nov 6 2023 bangladesh ended sri lanka s dreams of reaching the cricket world cup 2023 semifinals with a hard fought three wicket win in a match filled with controversies

#### table tennis bernd ulrich gross werner schlager google - Aug 28 2022

web table tennis tips from a world championa is a practical training book for successful table tennis the aim is not to copy werner schlager as a player but to use his tips to

## wtt champions frankfurt 2023 celebrating table tennis - Dec 20 2021

web 2 days ago world cup 2023 points table after five straight losses defending cricket world cup champions england finally returned to winning ways with a positive result

e book download table tennis tips from a world champion - Feb 19 2022

web oct 27 2023 the anticipation is palpable in the global table tennis community as wtt champions frankfurt 2023 unfolds over eight action packed days from october 29 to

#### **1001 table tennis tips** - Jul 27 2022

web table tennis tips from a world champion is a practical training book for successful table tennis the aim is not to copy werner schlager as a player but to use his tips to

it s a four way battle for the last two champions trophy spots - May 13 2021

## megan rapinoe says nwsl final perfect way to go out espn - Jul 15 2021

web nov 7 2023 as we approach the last few games of the league stage of the 2023 odi world cup the primary focus is obviously on the top four slots but that s for the top six

table tennis tips from a world champion ebook barnes noble - Feb 02 2023

web table tennis tips from a world champion gross bernd ulrich amazon com au books

#### how to win in table tennis medium - Jan 21 2022

web oct 30 2023 the table tennis champion of the world as ngannou himself wrote on instagram after this crossover contest even andy murray had to chime in as fury s

9 serve return tips for table tennis players by werner - Oct 30 2022

web table tennis tips from a world championa is a practical training book for successful table tennis the aim is not to copy werner schlager as a player but to use his tips to

#### table tennis tips from a world champion semantic scholar - Sep 28 2022

web find table tennis tips from top table tennis players coaches and sport scientists that have agreed to share their knowledge with expert table tennis werner schlager is a

## table tennis tips from a world champion goodreads - Jul 07 2023

web apr 15 2011 table tennis tips from a world champion is a practical training book for successful table tennis the aim is not to copy werner schlager as a player but to use

## table tennis tips from a world champion gross bernd ulrich - Aug 08 2023

web table tennis tips from a world champion by gross bernd ulrich 1957 publication date 2011 topics table tennis publisher

maidenhead meyer meyer sport uk collection

cricket world cup 2023 points table bangladesh end sri - Aug 16 2021

web oct 27 2023 cameron spencer getty images at the 2021 italian open iga swiatek was down two match points to barbora krejcikova in the third round but managed to escape

table tennis tips from a world champion amazon co uk - May 05 2023

web table tennis tips from a world champion is a practical training book for successful table tennis the aim is not to copy werner schlager as a player but to use his tips to

about bhel bharat heavy electricals limited - Apr 27 2022

web steam turbine gas turbine electric motor and vfd systems can be provided for driving the compressors bhel can provide complete solution involving driver compressor

#### bhel hyderabad product profile - Jul 31 2022

web sep 26 2017 1 of 28 bhel steam turbine manufacturing sep 26 2017 27 likes 6 779 views download now download to read offline engineering an internship presentation

## t steam turbine engineering bharat heavy electricals - Sep 01 2022

web product catalogue introduction bhel manufactures a complete line of heavy duty industrial gas turbines for all utility and industry applications they are installed in

bhel hyderabad product profile - Oct 14 2023

web bhel steam turbines cover the whole range of requirement from power captive power utility drive cogeneration solar applications and combined cycle power plants

bhel hyderabad product profile - Mar 27 2022

web jun 21 2022 baden switzerland 21 may 2022 ge steam power signed a 165m contract with bhel for the supply of three nuclear steam turbines out of six units for

introduction 1 industrial steam turbine bharat - Oct 02 2022

web i steam product turbine standardengineering page 03 of 04 i j f s 6 2 complete general arrangement and cross sectional drawing of the heater

## engineering india s power bharat heavy electricals limited - Jun 10 2023

web bhel has supplied and installed complete turbine island equipment for 12 out of 18 phwrs that have been installed in the country accounting for 74 of india s indigenous

#### bhel bags order for renovation and modernisation of steam - Feb 06 2023

web jan 20 2023 new delhi january 19 in the face of stiff competitive bidding bharat heavy electricals limited bhel has won

an order for the renovation modernisation  $\boldsymbol{r}$   $\boldsymbol{m}$ 

technical feedback bhel pswr - May 29 2022

web products water management captive major power areas defence projects of operation and other include industrial plants turbine supplies steam tr smission and gas

a government of india undertaking bharat heavy electricals - May 09 2023

web selected partner s shall exclusively address the r m of lmz steam turbine with bhel bhel partner s will jointly address the business opportunities for lmz steam

## features of bhel supplied supercritical steam turbine - Sep 13 2023

web bhel supplied siemens design steam turbines are equipped with advance and proven design features overload valve internal bypass cooling system in hp turbine low

replacement of steam turbine mechanical - Oct 22 2021

#### ge ge steam power signed a 165 million contract for three - Feb 23 2022

web 210 mw steam turbine reaction design set kwu ip turbine retrofitting 210 mw reaction turbine with improved t4 profile blading advantage improved performance scope of

ge steam power signed a 165 million contract for three nuclear - Nov 03 2022

web as a corporate policy we at bhel always give the top most priority to our customers customer service satisfaction and their delight is the most 1 industrial steam

#### ge steam power signs 165 mn contract with bhel - Apr 08 2023

web jun 21 2022 ge steam power has signed a usd 165 million contract with bhel for the supply of three nuclear steam turbines out of six units for npcil s domestic nuclear

erection testing commissioning etc of steam turbine and - Nov 22 2021

web replacement of steam turbine mechanical governor by electronic governing system and providing dcs control system for stg 3 12 5

#### bhel hyderabad about us bharat heavy electricals limited - Mar 07 2023

web bhel is the only manufacturer of nuclear steam turbines in the country the only company associated with all three stages of india s nuclear power programme a major supplier of

## bhel steam turbine manufacturing ppt slideshare - Jun 29 2022

web turbine supervisory instrumentation system for 210 200 mw tg sets bhel 1 8 3 18 stt 018 storage preservation instruction for steam turbine generator and auxiliaries

bhel steam turbines brochure pdf scribd - Dec 24 2021

web bhel house siri fort new delhi 110049 india cin l74899dl1964goi004281 note content on this website is published and managed by bharat heavy electricals limited

## bharat heavy electricals limited - Jul 11 2023

web steam valves for 660 800 mw rating steam turbine sets 1 introduction the steam turbine output is controlled by adjusting steam mass flow rate hy turbine

bharat heavy electricals limited wikipedia - Dec 04 2022

web may 21 2022 baden switzerland 21 may 2022 ge steam power signed a 165m contract with bhel for the supply of three nuclear steam turbines out of six units for

## steam turbine generator official website of bharat heavy - Aug 12 2023

web document value rs 1040 date of notification 23 07 2009 11 07 00 am closing date of sale from 11 08 2009 03 00 00 pm closing date of

bhel turbine manual pdf turbine applied and scribd - Jan 25 2022

web bhel steam turbines brochure uploaded by vsprobo steam turbines copyright all rights reserved available formats download as pdf or read online from scribd flag

## bhel hyderabad product profile bharat heavy electricals - Jan 05 2023

web two cylinder reheat steam turbines up to 200 mw energy efficient steam turbines for all industrial need complete range of customized steam turbines for all kinds of extraction