

Aspen Simulation Workbook

Deploy engineering models and automate conceptual design workflows using Microsoft Excel*

Aspen Simulation Workbook provides seamless integration between AspenTech's engineering tools and Microsoft Excel, allowing you to deploy models to a wider range of users. The result is new levels of value to your company through improved productivity during conceptual design and the expanded use of process models in operations for performance monitoring, better decisions, and optimization.

IIIIII Leveraging Process Models to Create Added Value

Simulation models are powerful tools for process design and revamps, yet many companies fail to leverage models beyond the design process due to perceived complexities. Modeling experts typically move on to the next design project, plant engineers may not have enough knowledge of the process simulator and have other responsibilities, and automating models requires expertise in programming.

Aspen Simulation Workbook addresses these issues by enabling seamless interoperability between AspenTech's engineering tools and Microsoft Excel—with no programming required. It brings the power of process modeling to a wider range of users, allowing companies to expand the use of process models to solve plant operating problems such as equipment troubleshooting, performance improvement and other plant studies, driving greater value from your simulation investment.

Reported Benefits

- Up to 5% increase in throughput resulting from improved operations
- Enhanced speed and consistency of extracting key results from process simulation, heat exchanger design cases and dynamic models
- Increased design quality with greater crossfunctional participation
- Up to 10% reduced energy use by presenting operators with operating advice based on current operating conditions
- Improved operating margins from better and consistent planning and business decisions
- Months of saved labor by eliminating the need to write program code



Microsoft Excel-based end-user interface enables process models to be used widely for operations decision-making.



Aspen Simulation Workbook User Guide University Of

Terry C. Jones

Aspen Simulation Workbook User Guide University Of:

National Library of Medicine Audiovisuals Catalog National Library of Medicine (U.S.), The Nurse's Guide to Computers Mary Anne Sweeney, 1985 **Chemical Engineering Progress** ,1994 Resources in Education ,1997 Computers, Control & Information Theory, 1982 National Library of Medicine Current Catalog National Library of **Subject Guide to Books in Print** ,1997 Government Reports Announcements & Index Medicine (U.S.), 1983 Bowker's Law Books and Serials in Print 1988 R. R. Whitaker's Cumulative Book List ,1983 ,1983-03 Whitaker's Book List ,1991 Bowker.1988 Whitaker's Books in Print ,1998 Who's who in American **Education** Robert Cecil Cook, 1966 Business Horizons Kelly School of Business, 1997 **American Book Publishing Record** ,1999 Books in Print ,1994 The Publishers' Trade List Annual ,1985 Forthcoming Books Rose El-Hi Textbooks and Serials in Print ,1986 Arny, 1998-04 Books in Print Supplement, 1985

Delve into the emotional tapestry woven by in Experience **Aspen Simulation Workbook User Guide University Of**. This ebook, available for download in a PDF format (PDF Size: *), is more than just words on a page; it is a journey of connection and profound emotion. Immerse yourself in narratives that tug at your heartstrings. Download now to experience the pulse of each page and let your emotions run wild.

 $\frac{http://www.technicalcoatingsystems.ca/files/publication/Documents/advanced_calculus_2nd_edition_by_patrick_m_fitzpatrick_thomson_brooks_cole_2006.pdf$

Table of Contents Aspen Simulation Workbook User Guide University Of

- 1. Understanding the eBook Aspen Simulation Workbook User Guide University Of
 - The Rise of Digital Reading Aspen Simulation Workbook User Guide University Of
 - Advantages of eBooks Over Traditional Books
- 2. Identifying Aspen Simulation Workbook User Guide University Of
 - 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 Aspen Simulation Workbook User Guide University Of
 - User-Friendly Interface
- 4. Exploring eBook Recommendations from Aspen Simulation Workbook User Guide University Of
 - Personalized Recommendations
 - Aspen Simulation Workbook User Guide University Of User Reviews and Ratings
 - Aspen Simulation Workbook User Guide University Of and Bestseller Lists
- 5. Accessing Aspen Simulation Workbook User Guide University Of Free and Paid eBooks
 - Aspen Simulation Workbook User Guide University Of Public Domain eBooks
 - Aspen Simulation Workbook User Guide University Of eBook Subscription Services

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

Aspen Simulation Workbook User Guide University Of Introduction

Aspen Simulation Workbook User Guide University Of Offers over 60,000 free eBooks, including many classics that are in the public domain. Open Library: Provides access to over 1 million free eBooks, including classic literature and contemporary works. Aspen Simulation Workbook User Guide University Of Offers a vast collection of books, some of which are available for free as PDF downloads, particularly older books in the public domain. Aspen Simulation Workbook User Guide University Of: This website hosts a vast collection of scientific articles, books, and textbooks. While it operates in a legal gray area due to copyright issues, its a popular resource for finding various publications. Internet Archive for Aspen Simulation Workbook User Guide University Of: Has an extensive collection of digital content, including books, articles, videos, and more. It has a massive library of free downloadable books. Free-eBooks Aspen Simulation Workbook User Guide University Of Offers a diverse range of free eBooks across various genres. Aspen Simulation Workbook User Guide University Of Focuses mainly on educational books, textbooks, and business books. It offers free PDF downloads for educational purposes. Aspen Simulation Workbook User Guide University Of Provides a large selection of free eBooks in different genres, which are available for download in various formats, including PDF. Finding specific Aspen Simulation Workbook User Guide University Of, especially related to Aspen Simulation Workbook User Guide University Of, might be challenging as theyre often artistic creations rather than practical blueprints. However, you can explore the following steps to search for or create your own Online Searches: Look for websites, forums, or blogs dedicated to Aspen Simulation Workbook User Guide University Of, Sometimes enthusiasts share their designs or concepts in PDF format. Books and Magazines Some Aspen Simulation Workbook User Guide University Of books or magazines might include. Look for these in online stores or libraries. Remember that while Aspen Simulation Workbook User Guide University Of, sharing copyrighted material without permission is not legal. Always ensure youre either creating your own or obtaining them from legitimate sources that allow sharing and downloading. Library Check if your local library offers eBook lending services. Many libraries have digital catalogs where you can borrow Aspen Simulation Workbook User Guide University Of eBooks for free, including popular titles.Online Retailers: Websites like Amazon, Google Books, or Apple Books often sell eBooks. Sometimes, authors or publishers offer promotions or free periods for certain books. Authors Website Occasionally, authors provide excerpts or short stories for free on their websites. While this might not be the Aspen Simulation Workbook User Guide University Of full book , it can give you a taste of the authors writing style. Subscription Services Platforms like Kindle Unlimited or Scribd offer subscription-based access to a wide range of Aspen Simulation Workbook User Guide University Of eBooks, including some

popular titles.

FAQs About Aspen Simulation Workbook User Guide University Of Books

How do I know which eBook platform is the best for me? Finding the best eBook platform depends on your reading preferences and device compatibility. Research different platforms, read user reviews, and explore their features before making a choice. Are free eBooks of good quality? Yes, many reputable platforms offer high-quality free eBooks, including classics and public domain works. However, make sure to verify the source to ensure the eBook credibility. Can I read eBooks without an eReader? Absolutely! Most eBook platforms offer web-based readers or mobile apps that allow you to read eBooks on your computer, tablet, or smartphone. How do I avoid digital eye strain while reading eBooks? To prevent digital eye strain, take regular breaks, adjust the font size and background color, and ensure proper lighting while reading eBooks. What the advantage of interactive eBooks? Interactive eBooks incorporate multimedia elements, quizzes, and activities, enhancing the reader engagement and providing a more immersive learning experience. Aspen Simulation Workbook User Guide University Of is one of the best book in our library for free trial. We provide copy of Aspen Simulation Workbook User Guide University Of in digital format, so the resources that you find are reliable. There are also many Ebooks of related with Aspen Simulation Workbook User Guide University Of online for free? Are you looking for Aspen Simulation Workbook User Guide University Of PDF? This is definitely going to save you time and cash in something you should think about.

Find Aspen Simulation Workbook User Guide University Of:

advanced calculus 2nd edition by patrick m fitzpatrick thomson brooks cole 2006

acog guidelines for perinatal care

accounting 17th edition pearson answers

advanced ceramics for dentistry chapter 2 teeth

activity 27 periodic riddles

accounting bmcc acc122

advanced html5 and css3 specialist

adaptive filters structures algorithms and applications the springer international series in engineering and computer science advanced criminal investigations and intelligence operations tradecraft methods practices tactics and techniques

advances in architectural geometry 2014
acidity of beverages chem fax lab answers
about insects a guide for children
acronyms list honeywell process
advanced accounting guerrero solution manual 2011 download

Aspen Simulation Workbook User Guide University Of:

vendor registration request letter to company with example - May 04 2023

web jan 30 2023 here is an view of a letter requisitioning vendor registration dear name i am writing to introduce myself press my company name we specialize in products services offered furthermore have been in business for number years i am letter to request of opportunity up register as a vendor for your company

free 8 sample vendor registration forms in ms word pdf - Feb 01 2023

web free 8 sample vendor registration forms in ms word pdf vendor registration form is the best way to get hold of the vendors and to get the complete process of procurement in a proper way vendor registration form helps you to enroll certain vendors on long term basis for supply of certain materials industries operate in the manner of

vendor registration request letter to company with example - Sep 08 2023

web jan 30 2023 here is an example of a letter requesting vendor registration dear name i am writing to introduce myself and my company name we specialize in products services offered and have been in business for number years i am writing to request the opportunity to register as a vendor for your company

vendor registration request letter to company with example - Aug 07 2023

web jan 30 2023 free 8 sample vendor registration forms in ms word pdf provide details and supporting intelligence in an next section of your proposal you need provide details information about your solution and any supporting information that may be related

vendor registration request letter sample letters in english - Oct 09 2023

web jun 18 2021 the manager name of the company address of the company date subject request for vendor registration dear sir madam with reference to order no order number i your name designation writing this letter for vendor registration vendor registration request letter to company with example - Aug 27 2022

web jan 30 2023 here is an example on one letter requesting suppliers registration dear name me am writing to introduce myself and my company name we specialize in products services offered and have been are business for number years

vendor registration request letter sample pdf - Jun 24 2022

web vendor registration request mail sample liberate download as pdf record pdf text file txt or read view for free scribd is the world's largest sociable reading and publishing site open navigate menu close suggestions search search en change language close menu language

email sample for vendor registration how to write an effective - Feb 18 2022

web jun 14 2023 a vendor registration email sample serves as a tool for businesses to invite vendors to register their services products or goods for consideration it outlines the necessary steps instructions and required documentation that the vendor needs to provide to complete the registration process

free vendor registration forms smartsheet - Mar 02 2023

web aug 5 2020 enter company contact company overview banking information and certification sign off to register for an event or conference upload a logo to personalize this easily fillable vendor registration form download sample vendor registration form word google docs pdf smartsheet

vendor letters in english - Apr 22 2022

web jun 15 2021 vendor registration request letter sample request letter for vendor registration june 18 2021 to the manager name of the company address of the company date subject request for vendor registration dear sir madam with reference to order no order number

free 8 vendor registration forms in pdf excel ms word - May 24 2022

web vendor registration application form bankofmaldives com mv details file format pdf size 1 mb download vendor registration supplemental disclosure nj gov details file format pdf size 483 kb download

10 vendor application templates free sample example - Nov 29 2022

web the vendor application templates can be of the fllowing types vendor registration template this registration form allows vendor to register for your business in order to sell their products using the platform vendor assessment template this template allows businesses to assess vendors \tilde{CO} ability and the associated risks of dealing with

vendor registration request letter sample pdf scribd - Jul 06 2023

web vendor registration request letter sample free download as pdf file pdf text file txt or read online for free **vendor registration form world trade organization** - Dec 31 2022

web vendor registration form please complete in full type or print in ink section 1 company details and general information 1 name of company 2 address 3 telephone number 4 fax number 5 e mail address 6 web site address 7 name title of company representative 8 direct e mail address of company representative 9

vendor registration request letter to company sample draft - Oct 29 2022

web freely download this sample quotation approval letter looking to register as a vendor our comprehensive guide provides a sample vendor registration request letter to company draft details and steps for vendor approval don t wait apply now **effective vendor registration request email sample a** - Apr 03 2023

web may 29 2023 contents show the best structure for vendor registration request email sample when you re seeking out vendors for your business a vendor registration request email is a vital first step the email s structure and format set the tone for your business interactions and can make or break your vendor relationships

vendor registration form template typeform - Jul 26 2022

web 1500 templates 120 integrations online order form template sell products and vouchers online with a custom order form job requisition form template speed up the hiring process with this internal request form for managers seller registration for booths form template jotform - Mar 22 2022

web vendor information form a vendor information form is a document used to gather fundamental data about a potential vendor or supplier a company can then use the information gathered to select a vendor this vendor information form template includes form fields for the company or vendor name their contact details business organization

10 examples of effective vendor registration email samples for - Sep 27 2022

web may 22 2023 a vendor registration email sample is a template that vendors can use to register their business with a company it typically includes information such as the vendor s name address contact information and products or services offered

vendor registration request letter until company with example - Jun 05 2023

web jan 30 2023 here is an example in a letter requesting vendor registration dear name i am writing to introduce myself real mine company name we specialize includes products services offered and have been include trade for number years i am text to request this opportunity to register the a distributor for your company

the ending of the hobbit an unexpected journey explained - Feb 26 2022

web nov 8 2022 the only real story progression in the hobbit an unexpected journey is regarding bilbo s motivation for joining the quest the movie seems to rely on us having seen the lord of the rings

the hobbit film series wikipedia - Feb 09 2023

web box office 2 938 billion the hobbit is a series of three epic high fantasy adventure films directed by peter jackson the films are subtitled an unexpected journey 2012 the desolation of smaug 2013 and the battle of the five armies 2014 5 the hobbit an unexpected journey wikipedia - Aug 15 2023

web the hobbit an unexpected journey is a 2012 epic high fantasy adventure film directed by peter jackson from a screenplay by fran walsh philippa boyens jackson and guillermo del toro based on the 1937 novel the hobbit by j r r tolkien

the hobbit an unexpected journey 2012 imdb - Jul 14 2023

web dec 14 2012 the hobbit an unexpected journey directed by peter jackson with ian mckellen martin freeman richard armitage ken stott a reluctant hobbit bilbo baggins sets out to the lonely mountain with a spirited group of dwarves to reclaim their mountain home and the gold within it from the dragon smaug

the hobbit an unexpected journey prime video - May 12 2023

web hobbit bilbo baggins joins 13 dwarves on a quest to reclaim the lost kingdom of erebor imdb 7 8 2 h 44 min 2012 pg 13 drama fantasy ambitious exciting

the hobbit an unexpected journey youtube - Jul 02 2022

web the hobbit an unexpected journey buy or rent pg 13 youtube movies tv 174m subscribers subscribe 3 1k share academy award winning filmmaker peter jackson returns to middle earth with the

the hobbit an unexpected journey the one wiki to rule - Aug 03 2022

web the hobbit an unexpected journey is the first film of the hobbit film trilogy lasting 3 hours and 2 minutes it was directed by peter jackson who previously had directed the lord of the rings film trilogy it was a major box office success grossing over **the hobbit an unexpected journey announcement trailer hd** - Sep 04 2022

web dec 23 2011 the hobbit an unexpected journey action adventure 2012 2 hr 49 min english audio and 11 more pg 13 7 6m views

the hobbit an unexpected journey amazon com tr - Mar 30 2022

web the hobbit an unexpected journey is the first in peter jackson s highly anticipated trilogy adapting the enduringly popular masterpiece the hobbit by j r r tolkien the adventure follows the journey of title character bilbo baggins who is swept into an epic quest to reclaim the lost dwarf kingdom of erebor from the fearsome dragon smaug

the hobbit an unexpected journey 2012 imdb - Nov 06 2022

web the hobbit an unexpected journey 2012 full cast crew imdb synopsis

the hobbit an unexpected journey 2012 - Jun 01 2022

web dec 14 2012 bilbo baggins a hobbit enjoying his quiet life is swept into an epic quest by gandalf the grey and thirteen dwarves who seek to reclaim their mountain home from smaug the dragon

the hobbit an unexpected journey 2012 imdb - Dec 27 2021

web the hobbit an unexpected journey 2012 232 of 747 martin freeman in the hobbit an unexpected journey 2012 people martin freeman

the hobbit an unexpected journey hulu - Apr 30 2022

web starring ian mckellenmartin freemanrichard armitage director peter jackson pg 13fantasy action adventure movie 2012

hd stream thousands of shows and movies with plans starting at 7 99 month start your free trial new subscribers only cancel anytime additional terms apply disney bundle trio basic

the hobbit an unexpected journey official trailer 2 hd - Jan 08 2023

web dec 14 2012 here alone with gollum on the shores of an underground lake the unassuming bilbo baggins not only discovers depths of ingenuity and courage that surprise even him he also gains possession of

watch the hobbit an unexpected journey netflix - Jun 13 2023

web the hobbit an unexpected journey 2012 maturity rating 16 action unavailable on an ad supported plan due to licensing restrictions in this prequel to the lord of the rings trilogy bilbo baggins joins a hardy group of dwarves on a the hobbit an unexpected journey rotten tomatoes - Apr 11 2023

web the hobbit an unexpected journey pg 13 2012 fantasy adventure 2h 49m 64 tomatometer 306 reviews 83 audience score 250 000 ratings what to know critics consensus peter jackson s return to

the hobbit an unexpected journey box office mojo - Jan 28 2022

web the hobbit an unexpected journey 2012 a reluctant hobbit bilbo baggins sets out to the lonely mountain with a spirited group of dwarves to reclaim their mountain home and the gold within it

the hobbit trailer 2012 movie official hd youtube - Dec 07 2022

web jan 30 2012 the hobbit an unexpected journey trailer 2012 official movie trailer in hd starring ian mckellen martin freeman cate blanchett bilbo baggins a hobb

hobbit beklenmedik yolculuk the hobbit an unexpected journey - Mar 10 2023

web dec 14 2012 Özet tolkien in yüzüklerin efendisi üçlemesinin öncül kitabı olarak da görülen hobbit ten üçlemenin yönetmeni peter jackson tarafından sinemaya uyarlanan üç filmlik hobbit macerasının ilk bölümü olan hobbit beklenmedik yolculuk the hobbit an unexpected journey ile bu sefer bilbo baggins in gençliğine gidiyoruz

watch the hobbit an unexpected journey prime video - Oct 05 2022

web pg 13 drama action ambitious exciting this video is currently unavailable to watch in your location bundle and save save with with the hobbit movie collection on prime video shop now details other titles in this franchise the lord of the rings the fellowship of the ring the lord of the rings the fellowship of the ring rent or buy

la catrina in english spanish english dictionary glosbe - Apr 29 2022

web mar 11 2022 la catrina episodio 01 la aventura comienza

<u>la catrina episode 4 flashcards quizlet</u> - May 11 2023

web 5 0 1 review flashcards learn test match episode 1 la aventura comienza click the card to flip as jamie sits in her room in los Ángeles she tells us about her family and

la catrina episode 7 answers doc read treca org - May 31 2022

web the calavera garbancera now known as la catrina or the dapper skeleton was created by mexican illustrator josé guadalupe posada in the early 20th century and it has since

la catrina episode 7 flashcards quizlet - Feb 08 2023

web compatible with your students will work alongside la catrina to prepare for and celebrate día de los muertos by learning important information about the holiday and completing 5

la catrina video workbook answer key form signnow - Sep 03 2022

web fill la catrina video workbook answer key edit online sign fax and printable from pc ipad tablet or mobile with pdffiller instantly try now

la catrina episode 3 flashcards quizlet - Aug 14 2023

web study with quizlet and memorize flashcards containing terms like episode 1 la aventura comienza episode 2 en casa de los navarro episode 3 un mensaje misterioso and

la catrina episodes 1 7 summaries flashcards quizlet - Apr 10 2023

web from la jacaranda in order to investigate sra gúzman s claim jamie goes off to buy the corn and vegetables and carlos the fruit jamie asks the first vendor if her corn comes

la catrina workbook answer key file type pdf florida state - Nov 24 2021

web oct 7 2023 how to say la catrina in english pronunciation of la catrina with 1 audio pronunciation and more for la catrina

get la catrina video workbook answer key us legal forms - Jul 01 2022

web access free la catrina episode 7 answers la catrina episode 7 answers motivate and reward your students with the two highly acclaimed video series la catrina and la

latina christiana games puzzles answer key fourth edition - Feb 25 2022

web title ebooks la catrina video workbook answer key category kindle and ebooks pdf author unidentified isbn785458 file type ebooks pdf file size 59 mb

la catrina worksheet teaching resources teachers pay - Jan 07 2023

web la catrina spanish hw questions and answers by griffin doyle tpt browse catalog pre k k 1 2 3 5 6 8 9 12 arts music social studies history holidays

la catrina episode 6 flashcards quizlet - Jun 12 2023

web 1 21 flashcards learn test match q chat katie legan top creator on quizlet terms in this set 21 who threatens demetrio silvestre who arrives at the library jamie

la catrina 7 ahs spanish help 2010 2020 - Mar 09 2023

web 1 24 flashcards learn test match created by katie legan terms in this set 24 where does carlos invite jamie the market what time are they going to go 12 what

la catrina video workbook answer key pdffiller - Aug 02 2022

web follow these simple instructions to get la catrina video workbook answer key completely ready for sending select the sample you will need in our library of legal templates open

answer key practice test la catrina e3 4 pdf course hero - Oct 04 2022

web quick steps to complete and e sign la catrina answer key online use get form or simply click on the template preview to open it in the editor start completing the fillable fields

la catrina video workbook answer key the apache software - Jan 27 2022

web la catrina workbook answer key pdf free pdf download now source 2 la catrina workbook answer key pdf free pdf download workbook answer key welcome to

la catrina episodio 01 la aventura comienza voutube - Mar 29 2022

web product description the answer key has inset pages with answers from latina christiana games puzzles a supplemental book that provides activity worksheets for each latina

la catrina spanish hw questions and answers tpt - Dec 06 2022

web activity to learn about la catrina included in activity short reading about la catrina comprehension questions about reading you tube commercial about la catrina with

results for la catrina tpt - Nov 05 2022

web view answer key practice test la catrina e3 4 pdf from spanish iii at munster high school

la catrina episode summaries flashcards quizlet - Jul 13 2023

web 1 39 flashcards learn test match q chat katie legan top creator on quizlet terms in this set 39 what is philip like good looking and fun where are they at the

la catrina flashcards quizlet - Sep 15 2023

web 1 24 flashcards learn test match created by katie legan terms in this set 24 does carlos think his father cooks good no what does jamie try for her first time

la catrina answer key mypthub - Dec 26 2021

web la catrina workbook answer key how do you know that finches beak depth is heritable you can see from figure 2 that there is a correlation between the parents and offsprings

how to pronounce la catrina howtopronounce com - Oct 24 2021