Decimal Operations Foldable

Data is bigger, arrives faster, and comes in a variety of formats—and it all needs to be processed at scale for analytics or machine learning. But how can you process such varied workloads efficiently? Enter Apache Spark. Updated to include Spark 3.0, this second edition shows data engineers and data scientists why structure and unification in Spark matters. Specifically, this book explains how to perform simple and complex data analytics and employ machine learning algorithms. Through step-by-step walk-throughs, code snippets, and notebooks, you'll be able to: Learn Python, SQL, Scala, or Java high-level Structured APIs Understand Spark operations and SQL Engine Inspect, tune, and debug Spark operations with Spark configurations and Spark UI Connect to data sources: JSON, Parquet, CSV, Avro, ORC, Hive, S3, or Kafka Perform analytics on batch and streaming data using Structured Streaming Build reliable data pipelines with open source Delta Lake and Spark Develop machine learning pipelines with MLlib and productionize models using MLflow

This enhanced ebook also contains a selection of additional interactive features specifically designed to support you in your study, including: Multiple choice questions with dedicated feedback at the end of key sections enabling you to test your understanding of what you have just readEnd of Chapter Quizzes which test your knowledge of the chap. Haskell is an advanced general purpose programming language. This tutorial covers all aspects of Haskell development from foundations to compiler development.MonadsMonad TransformersLanguage ExtensionsType ClassesLazinessPreludeStringsApplicativesError HandlingAdvanced MonadsQuantificationGeneralized Algebraic DatatypesInterpretersTestingType FamiliesPromotionGenericsMathematicsData StructuresForeign Function InterfaceConcurrency and ParallelismGraphicsParsersStream ProcessingCryptographyDate and TimeData Formats and SerialisationNetwork and Web ProgrammingDatabasesGHC CompilerProfilingCompiler DevelopmentTemplate HaskellCategory Theory

An introduction to computational complexity theory, its connections and interactions with mathematics, and its central role in the natural and social sciences, technology, and philosophy Mathematics and Computation provides a broad, conceptual overview of computational complexity theory—the mathematical study of efficient computation. With important practical applications to computer science and industry, computational complexity theory has evolved into a highly interdisciplinary field, with strong links to most mathematical areas and to a growing number of scientific endeavors. Avi Wigderson takes a sweeping survey of complexity theory, emphasizing the field's insights and challenges. He explains the ideas and motivations leading to key models, notions, and results. In particular, he looks at algorithms and complexity, computations and proofs, randomness and interaction, quantum and arithmetic computation, and cryptography and learning, all as parts of a cohesive whole with numerous cross-influences. Wigderson illustrates the immense breadth of the field, its beauty and richness, and its diverse and growing interactions with other areas of mathematics. He ends with a comprehensive look at the theory of computation, its methodology and aspirations, and the unique and fundamental ways in which it has shaped and will further shape science, technology, and society. For further reading, an extensive bibliography is provided for all topics covered. Mathematics and Computation is useful for undergraduate and graduate students in mathematics, computer science, and related fields, as well as researchers and teachers in these fields. Many parts require little background, and serve as an invitation to newcomers seeking an introduction to the theory of computation. Comprehensive coverage of computational complexity theory, and beyond High-level, intuitive exposition, which brings conceptual clarity to this central and dynamic scientific discipline Historical accounts of the evolution and motivations of central concepts and models A broad view of the theory of computation's influence on science, technology, and society Extensive bibliography

The National Wildfire Coordinating Group provides national leadership to enable interoperable wildland fire operations among federal, state, local, tribal, and territorial partners. Primary objectives include: Establish national interagency wildland fire operations standards. Recognize that the decision to adopt standards is made independently by the NWCG members and communicated through their respective directives systems; Establish wildland fire position standards, qualifications requirements, and performance support capabilities (e.g. training courses, job aids) that enable implementation of NWCG standards; Support the National Cohesive Wildland Fire Management Strategy goals: to restore and maintain resilient landscapes; create fire adapted communities; and respond to wildfires safely and effectively; Establish information technology (IT) capability requirements for wildland fire; and Ensure that all NWCG activities contribute to safe, effective, and coordinated national interagency wildland fire operations. The objectives of the "Interagency Helicopter Operations Guide" (IHOG) are to: Promote safe, cost-efficient and effective aviation services in support of agency and interagency goals and objectives; Define and standardize national, interagency helicopter management and operational procedures for helicopter users from participating agencies; Through standardization, facilitate the ability of personnel from different agencies to work cooperatively on incidents or projects; and Provide a framework within which areas, regions, states, and local units can provide supplemental, site-specific guidance. The procedures contained in this guide apply to helicopter operations conducted by providers and users of helicopters from participating agencies. This guide addresses both incident and resource helicopter operations.

Do your students know which content is most important to learn? Academic standards call for increased rigor, but simply raising complexity is not enough. Students must also take responsibility for their own learning. They need to be able to determine which content is critical, why it is important, how it connects to their existing knowledge, and when it will inform their future learning.Based on the earlier work of Dr. Robert J. Marzano, Identifying Critical Content: Classroom Strategies to Help Students Know What is Important

explores explicit techniques for mastering a crucial strategy of instructional practice: teaching students the skill of identifying critical content. It includes: ·Explicit steps for implementation ·Recommendations for monitoring if students are able to identify critical content ·Adaptations for students who struggle, have special needs, or excel in learning ·Examples and non-examples from classroom practice ·Common mistakes and ways to avoid them The Essentials for Achieving Rigor series of instructional guides helps educators become highly skilled at implementing, monitoring, and adapting instruction. Put it to practical use immediately, adopting day-to-day examples as models for application in your own classroom.

The story of how an Iowa farmer-inventor fought the industry giants and created one of the largest private farm equipment manufacturers in the world

Intended to provide the basic foundation for modern archival practice and theory.

Do you cringe when a student declares "cross multiply!" as soon as they see a problem involving fractions? It doesn't matter whether you teach elementary or high school, whether you're a parent or a tutor, having a student yell out a trick without stopping to think is painful. This book is filled with alternatives to the shortcuts so prevalent in mathematics education and explains exactly why the tricks are so bad for understanding math.

"A series for teaching mathematics."--P. [1] of cover.

The author of the best-selling Real Life Math Mysteries offers students more close encounters with engaging professionals! After working through the math problems encountered on the job, your students will have no doubt about the absolute importance of math in the real world. Just like a field trip, but a lot more practical, this book takes students out into the field where they count fish, direct air traffic, carve a totem pole, write software code, care for orphaned sea creatures, recover sunken valuables, mush dogs, salvage timber, feed the homeless, film wildlife, and a lot more. The math problems are tied to NCTM standards, and students will use skills such as selecting an operation, determining place value, using fractions and decimals, working with geometry, applying measurement skills, estimating, and recording and analyzing data to solve them. Each set of problems is presented on separate reproducible worksheets, and the book includes a list of skills and comprehensive answer key. Working with the engaging and diverse mathematics presented here, students will see exactly what is at stake in problem solving, why mathematics is essential, and why accuracy matters. The light will go on for your students as they see that mathematical skills are essential to following their dreams. Grades 4-8

It is only recently, with the increasing interest in origami and folding in natural sciences and the humanities, that the fold as a new conception in a whole range of disciplines has begun to be conceived in a broader way. Folding as a material and structural process offers a new methodology to think about the close relationship of matter, form and code. It henceforth crosses out old dichotomies, such as the organic and the inorganic or nature and technology, and blurs the boundaries between experimental, conceptual and historical approaches. This anthology aims to unfold this new interdisciplinary field and its disciplinary impact, ranging from materials science, biology, architecture, and mathematics to literature and philosophy.

You had better not monkey around when it comes to place value. The monkeys in this book can tell you why! As they bake the biggest banana cupcake ever, they need to get the amounts in the recipe correct. There's a big difference between 216 eggs and 621 eggs. Place value is the key to keeping the numbers straight. Using humorous art, easy-to-follow charts and clear explanations, this book presents the basic facts about place value while inserting some amusing monkey business.

This is part 2 of a 3 volume series for middle school students.

Step right up! Come take part in the county fair, where you'll see fractions, decimals, and percents everywhere. Gobble up a fraction of pie, boost your batting average in the arcade,and take a percent off the price of a toy. Learning about equivalent parts equals a whole lot of fun in this straightforward introduction to a challenging concept.

This practical resource provides 40 research-based, classroom-tested, and developmentally appropriate mini lessons for kindergarten through grade 3 - presented in the context of authentic writing experiences. You can use these lessons to teach students how to: generate and organize ideas before writing, and then turn their prewriting ideas into connected text; develop writing style by focusing on word choice, voice, and fluency; increasingly use conventional spelling, capitalization, punctuation, and grammar to produce more readable work; and revise their writing for clarity, style, and effectiveness. Also included are charts to help you decide which lessons suit your students' needs; language you might use when presenting the lessons to students; notes sections, where you can record and reflect on what works and what doesn't; and reproducibles.

This large number line is numbered -20 to +100. Measures a full 32 feet by 4" (11m x 10cm).

Learn how to make all sorts of pictures, from birds and fish to clowns and flowers, by using the simplest of shapes.

This book constitutes the proceedings of the 6th International Conference on Pattern Recognition and Machine Intelligence, PReMI 2015, held in Warsaw, Poland, in June/July 2015. The total of 53 full papers and 1 short paper presented in this volume were carefully reviewed and selected from 90 submissions. They were organized in topical sections named: foundations of machine learning; image processing; image retrieval; image tracking; pattern recognition; data mining techniques for large scale data; fuzzy computing; rough sets; bioinformatics; and applications of artificial intelligence.

Peter Mattock's Visible Maths: Using representations and structure to enhance mathematics teaching in schools supports teachers in their use of concrete and pictorial representations to illustrate key mathematical ideas and operations. Viewing the maths lesson as an opportunity for pupils to develop a deep understanding of mathematical concepts and relationships, rather than simply to follow fixed processes that lead to 'the answer', is increasingly recognised as the pinnacle of best practice in maths education. In this book, Peter Mattock builds on this approach and explores in colourful detail a variety of visual tools and techniques that can be used in the classroom to deepen pupils' understanding of mathematical operations. Covering vectors, number lines, algebra tiles, ordered-pair graphs and many other representations, Visible Maths equips teachers with the confidence and practical know-how to take their pupils' learning to the next level. The book looks at the strengths, and flaws, of each representation so that both primary and secondary school teachers of maths can make informed judgements about which representations will benefit their pupils. The exploration begins at the very basics of number and operation, and extends all the way through to how the representations apply to algebraic expressions and manipulations. As well as sharing his expert knowledge on the subject, Peter draws on relevant research and his own experience of using the representations in order to support teachers in understanding how these representations can be implemented effectively. Visible Maths also includes a glossary covering the key mathematical terms, as well as a chapter dedicated to answering some of the questions that may arise from the reading of the book. Furthermore, the accompanying diagrams and

models are displayed in full colour to illustrate the conceptual takeaways and teaching techniques discussed. Suitable for teachers of maths in primary and secondary school settings.
Offers twenty graphic organizer projects with instructions, templates, lists of objectives and materials, item descriptions, and suggestions for using the item for alternate topics on ready-to-reproduce pages.
Every Math Learner, Grades 6-12A Doable Approach to Teaching With Learning Differences in MindCorwin Press
Earn over $120,000 as an SQL database developer and/or designer! SQL Server 2016 database design & SQL programming book is an essential guide for building a bright career in Information Technology. It is sufficient to master this SQL Server 2016 book to know SQL Server 2005/2008/2012/2014 since the book has frequent version references. The relational database is a marvelous invention (thanks to IBM staff) of Computer Science to organize and manipulate data in a logical way. The SQL (Structured Query Language) is equally magical invention which allows us to work with data - 10 rows or 10 billion rows - at ease. SQL Server 2016 is the latest and best RDBMS (Relational Database Management System) from Microsoft with a host of new enhancements. Upon mastering this book you can launch a rewarding career in SQL Server database design and programming. Good Luck! Contents at a Glance SQL Server 2016 New Features CHAPTER 1: SQL Server Sample & System Databases CHAPTER 2: Installing SQL Server 2016 CHAPTER 3: Structure of the SELECT Statement CHAPTER 4: SQL Server Management Studio CHAPTER 5: Basic Concepts of Client-Server Computing CHAPTER 6: Fundamentals of Relational Database Design CHAPTER 7: Normal Forms & Database Normalization CHAPTER 8: Functional Database Design CHAPTER 9: Advanced Database Design Concepts CHAPTER 10: New Programming Features in SS 2012 & 2014 CHAPTER 11: JOINing Tables with INNER & OUTER JOINs CHAPTER 12: Basic SELECT Statement Syntax & Examples CHAPTER 13: Subqueries in SELECT Statements CHAPTER 14: SELECT INTO Table Creation & Population CHAPTER 15: Modify Data - INSERT, UPDATE, DELETE & MERGE CHAPTER 16: The Magic of Transact-SQL Programming CHAPTER 17: Exporting & Importing Data APPENDIX A: Job Interview Questions APPENDIX B: Job Interview Answers
Your students will develop a greater understanding of the math concepts required for mastery of the new NCTM Standards. Easy-to-follow instructions, fun-to-solve puzzles and riddles, and many self-checking activities make these books a hit in any middle school math class.
Differentiation that shifts your instruction and boosts ALL student learning! Nationally recognized math differentiation expert Nanci Smith debunks the myths surrounding differentiated instruction, revealing a practical approach to real learning differences. Theory-lite and practice-heavy, this book provides a concrete and manageable framework for helping all students know, understand, and even enjoy doing mathematics. Busy secondary mathematics educators learn to Provide practical structures for assessing how students learn and process mathematical concepts information Design, implement, manage, and formatively assess and respond to learning in a standards-aligned differentiated classroom Adjust current materials to better meet students' needs Includes classroom videos and a companion website.
This book focuses on origami from the point of view of computer science. Ranging from basic theorems to the latest research results, the book introduces the considerably new and fertile research field of computational origami as computer science. Part I introduces basic knowledge of the geometry of development, also called a net, of a solid. Part II further details the topic of nets. In the science of nets, there are numerous unresolved issues, and mathematical characterization and the development of efficient algorithms by computer are closely connected with each other. Part III discusses folding models and their computational complexity. When a folding model is fixed, to find efficient ways of folding is to propose efficient algorithms. If this is difficult, it is intractable in terms of computational complexity. This is, precisely, an area for computer science research. Part IV presents some of the latest research topics as advanced problems. Commentaries on all exercises included in the last chapter. The contents are organized in a self-contained way, and no previous knowledge is required. This book is suitable for undergraduate, graduate, and even high school students, as well as researchers and engineers interested in origami.
Educators across grade levels and content areas can apply the concepts of Marzano's New Taxonomy to turn standards into concrete objectives and assessments to measure student learning.
How Students Learn: Science in the Classroom builds on the discoveries detailed in the best-selling How People Learn. Now these findings are presented in a way that teachers can use immediately, to revitalize their work in the classroom for even greater effectiveness. Organized for utility, the book explores how the principles of learning can be applied in science at three levels: elementary, middle, and high school. Leading educators explain in detail how they developed successful curricula and teaching approaches, presenting strategies that serve as models for curriculum development and classroom instruction. Their recounting of personal teaching experiences lends strength and warmth to this volume. This book discusses how to build straightforward science experiments into true understanding of scientific principles. It also features illustrated suggestions for classroom activities.

Features instructions for 29 manipulatives, with approximately 100 full-color photographed examples. Science topics are divided into four categories, Physical Science/Physics, Astronomy, Earth Science, and Life Science/Biology. The book contains thousands of ideas for teaching science using graphic organizers, as well as five black-line art examples per page.

This twenty-third ICMI Study addresses for the first time mathematics teaching and learning in the primary school (and pre-school) setting, while also taking international perspectives, socio-cultural diversity and institutional constraints into account. One of the main challenges of designing the first ICMI primary school study of this kind is the complex nature of mathematics at the early level. Accordingly, a focus area that is central to the discussion was chosen, together with a number of related questions. The broad area of Whole Number Arithmetic (WNA), including operations and relations and arithmetic word problems, forms the core content of all primary mathematics curricula. The study of this core content area is often regarded as foundational for later mathematics learning. However, the principles and main goals of instruction on the foundational concepts and skills in WNA are far from universally agreed upon, and practice varies substantially from country to country. As such, this study presents a meta-level analysis and synthesis of what is currently known about WNA, providing a useful base from which to gauge gaps and shortcomings, as well as an opportunity to learn from the practices of different countries and contexts.

Develop your grade 7 students sentence editing, punctuation, grammar, vocabulary, word study, and reference skills using 180 focused 10- to 15-minute daily activities.