

Mental Addition And Subtraction Strategies And Question Cards

These simple math secrets and tricks will forever change how you look at the world of numbers. Secrets of Mental Math will have you thinking like a math genius in no time. Get ready to amaze your friends—and yourself—with incredible calculations you never thought you could master, as renowned “mathemagician” Arthur Benjamin shares his techniques for lightning-quick calculations and amazing number tricks. This book will teach you to do math in your head faster than you ever thought possible, dramatically improve your memory for numbers, and—maybe for the first time—make mathematics fun. Yes, even you can learn to do seemingly complex equations in your head; all you need to learn are a few tricks. You’ll be able to quickly multiply and divide triple digits, compute with fractions, and determine squares, cubes, and roots without blinking an eye. No matter what your age or current math ability, Secrets of Mental Math will allow you to perform fantastic feats of the mind effortlessly. This is the math they never taught you in school.

The aim of this study is to examine the mental computation strategies of suburban third graders as related to two-digit addition and subtraction. The author posed that the scores on a mental computation assessment would be significantly different than scores on the same test where students were allowed to use pencil and paper. Twenty-four students in a suburban third grade classroom were given the sixteen item test twice (once using only mental math and once with paper and pencil available). The scores of the mental and writ-ten tests were compared and analyzed for common mistakes. Based on performance on the mental computation test six students participated in a qualitative study. Three students from the top 25% and three from the bottom 25% of scores on the mental test were inter-viewed by the researcher. Students then explained their thinking on three items designed to illicit known mental computation strategies. The researcher found that students who were successful mental computers had various strategies to solve an arithmetic problem, whereas students who scored poorly on the mental test relied heavily on visualizing the standard algorithm in their head.

Presents math strategies, activities, and step-by-step examples to help students understand and compute math problems without the aid of written or calculator computations.

As Applied to Addition and Subtraction of Two-digit Numbers

Developing Number Knowledge

Learning and Teaching Mathematics 0-8

Year 1

Mental Math Grade 4

Mental Math, Level 2, Grade 3

More than just Mental Maths books - this series will equip students with all the mental maths strategies they need to excel in Maths through out their lives. Mental Maths is the maths we do in our heads without the use of calculators and without writing down the calculation. Mental Maths strategies are the 'tricks' we use to do Maths in our heads. There are different ways of finding the answer to any Mental Maths problem, and such strategies are the focus of this series. Mental Maths has become more important than ever and new primary Maths syllabuses in Australia are reflecting this. For example, NSW has placed an emphasis on Mental Maths in its primary syllabus, and even the Year 10 School Certificate examination has a compulsory non-calculator section. Features of this book: 32 double-page units of Mentals are included - 8 units for each school term. Each unit is divided into four sets (A, B, C and D) each set within each unit covers a different area of Maths : for example, set A always covers addition, subtraction, multiplication and division, while set D always covers measurement the fun illustrations and cartoons will help children engage with the Maths concepts and enjoy completing the activities the answers to all questions are in a lift-out section in the centre of the book a special 'Help' section at the front of the book gives different strategies and explanations to help students solve Mentals problems. This link to the different kind of questions found in sets A, B, C and D

Mental Math is a workbook devoted to mastering mental calculation for second grade students. Math researchers concur that the ability of students to make math pictures in their minds of the values and sizes of numbers readies them for learning addition, subtraction, multiplication, and more. This series will show students how to work out math problems in their minds, an important part of math proficiency. Important computation quick tips and thinking shortcuts are provided. This collection is part of the successful Singapore Math series, and was written in Singapore and adapted from the world-renowned Singapore math curriculum. From here, students will easily progress to the next math level. 64 reproducible pages and an answer key.

The Numeracy Extras series provides a range of materials developed to be used alongside existing resources as extras to support maths teaching. The books in the Maths Express range are designed to stretch the more able pupil in a whole class context, and feature challenging exercises.

The Empty Number Line Book

Year 5

A Study of how Different Mental Calculation Strategies Influenced Young Children's Responses to Oral Addition and Subtraction Problems

Mental Maths Strategies

Second Handbook of Research on Mathematics Teaching and Learning

Number Talks

Mental Math is a workbook devoted to mastering mental calculation for seventh grade students. Math researchers concur that the ability of students to make math pictures in their minds of the values and sizes of numbers readies them for learning addition, subtraction, multiplication, and more. This series will show students how to work out math problems in their minds, an important part of math proficiency. Important computation quick tips and thinking shortcuts are provided. This collection is part of the successful Singapore Math series, and was written in Singapore and adapted from the world-renowned Singapore math curriculum. From here, students will easily progress to the next math level. 64 reproducible pages and an answer key.

A New York Times Bestseller! Based on the #1 New York Times bestselling picture book sensation The Good Egg, Jory John and Pete Oswald present: The Great Eggscap! The Great Eggscap is when the Good Egg and his pals escape their carton and drop into the store for a morning of fun, enjoyed by everybody. Well, almost everybody. Shel (an egg) isn't a huge fan of group activities, especially when he's made to be "It" for a game of hide-and-seek. Nevertheless, Shel doesn't want to let his friends down, so he reluctantly plays, anyway. But after a morning of hiding and seeking, somebody's still missing. Will the dozen eggs friends ever be reunited? Find out in this hilarious egg hunt adventure that reminds us to break out of our shells and help our friends in need!

A compilation of strategies, methods and resources that make it easy for the young mind to master mathematical thinking and attain math fluency in a way never witnessed before. This incredible book includes:- Instructional notes- Write in worksheets- Ideas for mental math- Counting tools and strategies- Number bonds!- Fun addition methods- Fun subtraction methodsAnd many, many more!

Mental Calculation Strategies for the Addition and Subtraction of 2-digit Numbers

Strategies for Addition and Subtraction Facts Within 18

Mental Math Techniques for Mastering Addition and Subtraction Facts

The Influence of Mathematics Anxiety on Pupils' Choice of Mental Calculation Strategies for Two-digit Addition and Subtraction

Mental Math Grade 7, Level 6

Primary Mathematics for Trainee Teachers

Addition, Subtraction, and Problem Solving, Grade 3 Workbook covers a lot of territory. We review and learn more about mental addition and subtraction strategies, review regrouping in addition and subtraction, learn to regroup twice in subtraction, and then study Roman numerals, rounding, the order of operations, and graphs. Through it all, students solve lots of word problems and practice some algebra in disguise, where they use a symbol or a ? for the unknown thing in the problem. I have included several lessons that review mental math, so that even students who perhaps did not study mental math strategies in earlier grades can now catch up. Students also learn and practice regrouping in addition and subtraction. In subtraction, the focus is on regrouping twice and regrouping with zero tens when subtracting three-digit numbers. The lessons illustrate the processes with the help of pictures that relate to base-ten blocks. You can also use tangible manipulatives if you prefer. The basic idea of regrouping in subtraction is that a unit gets broken into 10 smaller units: a hundred into 10 tens or a ten into 10 ones, and that is what allows you to subtract. Make sure the student masters this topic. This workbook also introduces rounding to the nearest ten, and parentheses with the order of operations as new topics. Then we study the connection between addition and subtraction with bigger numbers, which also aims to help children think algebraically. Lastly, students get to practice their adding and subtracting skills in a practical way through reading a mileage chart and other types of graphs.

These books contain number activities designed to involve particular calculations, providing you with the ideal reason for teaching appropriate strategies. Each strategy is carefully unpicked to help you understand and teach it. * 24 number games, activities or challenges in each book * uses a range of models and images to engage children, whatever their learning style * questions to prompt discussion of strategies used * help with differentiation to suit a range of ages and abilities * includes record chart to help with assessment for learning * 64 pages in each book.

Mental Maths is the maths we do in our heads without the use of calculators and without writing down the calculation. Mental Maths strategies are the 'tricks' we use to do Maths in our heads. There are different ways of finding the answer to any Mental Maths problem, and such strategies are the focus of this series. Excel Basic Skills: Mental Maths Strategies Year 2 contains: 32 units of work, with eight units of work for each school term. each unit is broken up into 4 sets: A, B, C and D. Each set is on a different topic. you will notice illustrations at the top of nearly every page. These characters are used to convey an important strategy or step in Mental Maths. each page of Mental Maths has an extra practice section in the lower part which will give the student further practice in a concept. The illustrations help explain the concepts and strategies that could be used to answer the questions. answers are provided in the middle of the book

The Art of Calculating in Your Head

Addition and Subtraction

Assessment, Teaching and Intervention with 7-11 year olds

Excel Basic Skills Mental Maths Strategies Year 3

Mental Computation and Estimation

Lower Elementary Math Made Easy

This Fourth Edition of Derek Haylock's much loved textbook has been fully revised and restructured to match the current Attainment Targets for mathematics in England. Every chapter is written in a way that integrates children's learning, classroom practice and the teacher's own requirements for subject knowledge, making this the ideal text for primary PGCE courses. Features in the new edition include: two new chapters on mathematics in the primary curriculum and learning to learn mathematics more prominence given to using and applying mathematics sections matching the attainment targets for mathematics more learning and teaching points highlighted throughout the text further material on number, risk, use of ICT, graphs and data-handling. a research focus in every chapter. Additional online support The companion website provides a glossary and additional material to enable primary trainees to prepare with confidence for the ITT Numeracy test, and provides details of how each chapter of the book is linked to the National Curriculum. This will be updated to reflect any updates to the National Curriculum as they are introduced. You can also follow Derek Haylock's blog and Twitter feeds to discuss and share issues, news, policy and anything primary maths related! -Visit the companion website: www.uk.sagepub.com/haylock -Review Derek's blog: <http://derek-haylock.blogspot.co.uk/> -Follow Derek on Twitter: https://twitter.com/derek_haylock Extensively used on primary PGCE courses and undergraduate courses leading to QTS, this bestselling book is an essential resource for all trainee primary teachers. A companion Student Workbook is also available, which:

provides self-assessment activities for students to check their understanding of key concepts helps students to practise key mathematical processes and to apply mathematics in real-life situations gives opportunities to apply their knowledge to teaching and learning. Mental calculations and estimations are basic, everyday skills that are essential for real-life arithmetic operations and number sense. This book presents a much needed overview and analysis of mental computation and estimation, drawing on contemporary research and empirical studies that were conducted on students, teachers and adults to cover all aspects of this complex field. Mental Computation and Estimation analyses the implications that are involved in the research, teaching and learning of mathematics and delivers effective practices that will enhance everyday learning for students. Focusing on a range of international research and studies from the School of Nature and Life Mathematics in Greece, it answers a number of important questions including: What mental calculations and estimations are, why they are important and what other mathematical concepts and cognitive behaviors are they related to? What strategies are used on mental additions, subtractions, multiplications and divisions and how are multiplication tables learned? What are the new trends in the teaching of mental calculation and estimation? An invaluable resource for all those involved in the practice and research of mathematics education, Mental Computation and Estimation will also be a useful tool for researchers, policy makers and developers of educational programs.

Mental Maths is the maths we do in our heads without the use of calculators and without writing down the calculation. Mental Maths strategies are the tricks,, we use to do Maths in our heads. There are different ways of finding the answer to any Mental Maths problem, and such strategies are the focus of this series. Even though calculators and computers play an enormous role in the modern world, we still need to go back to the basics % we do need to know how to check that the sales assistant at the counter is giving us the right change! Mental Maths has become more important than ever and new primary Maths syllabuses in Australia are reflecting this. For example, NSW has placed an emphasis on Mental Maths in its primary syllabus, and even the Year 10 School Certificate examination has a compulsory non-calculator section. Features of this book include:- 32 double-page units of Mentals are included % 8 units for each school term each unit is divided into four sets (A,B,C and D) of 20 questions each each numbered question covers particular Maths topics throughout the book: for example, Question 1 always covers addition, while Question 20 always covers geometry a special e'Help' section,, at the front of the book gives different strategies and explanations to help students solve Mentals problems. These are also numbered so they link to the question numbers in each Mentals unit a eFun Spot,, unit, containing fun activities,, and a eRevision,, unit are included at the end of each 8 units extra practice,, sections which reinforce particular strategies appear in the lower part of each page answers to all questions are in a lift-out section in the centre of the book

Subtraction Facts that Stick: Help Your Child Master the Subtraction Facts for Good in Just Eight Weeks (Facts That Stick)

The Mathemagician's Guide to Lightning Calculation and Amazing Math Tricks

The Good Egg Presents: The Great Eggscap!

Working with the Whole Class

Excel Basic Skills Mental Maths Strategies

Presents math strategies designed to help students break down problems and compute answers without the aid of written or calculator computation.

The fun, engaging program that will help your child master the subtraction facts once and for all—without spending hours and hours drilling flash cards! Subtraction Facts That Stick will guide you, step-by-step, as you teach your child to understand and memorize the subtraction facts, from 1 – 1 through 9 – 9. Hands-on activities, fun games your child will love, and simple practice pages help young students remember the subtraction facts for good. In 15 minutes per day (perfect for after school, or as a supplement to a homeschool math curriculum) your child will master the subtraction facts, gain a greater understanding of how math works, and develop greater confidence, in just six weeks! Mastery of the math facts is the foundation for all future math learning. Lay that foundation now, and make it solid, with Subtraction Facts That Stick!

Get access to an interactive eBook* when you buy the paperback! (Print paperback version only, ISBN 9781446285879) A Unique Blend of Digital and Print Learning Resources! 5 Star student reviews: “A must have for teachers—to-be, especially those who are a bit shaky on their maths knowledge!” “Not many maths books keep me fixated but this is one that is definitely worth the money.” “It is a book I will be using even when in the classroom.” Mathematics Explained for Primary Teachers develops your understanding of mathematical concepts and processes, and how children learn them, so you can confidently teach mathematics to primary children. Tried and tested, the fifth edition of Derek Haylock's much loved textbook matches the 2014 curriculum requirements for England. Every chapter integrates children's learning, classroom practice, and teacher's own requirements for subject knowledge, making this the ideal text to guide you through your studies and beyond. More than just a book! The new edition is supported by FREE access to an interactive eBook and a companion website allowing you to use a wealth of teaching and learning resources. You can use the eBook to study where and when you want, and read, annotate and search the book on a tablet, laptop or PC. You can also visit study.sagepub.com/haylock5e to access: Videos by the author introduce core themes of each section and explain key mathematical processes. Links to the National Curriculum specify the statutory requirements for primary schools in England that relate to the mathematical content of each chapter. Learning and Teaching points highlight important issues you may face in the classroom and provide practical guidance for teaching. Self-assessment questions help check your understanding and provide immediate feedback to see how well you have done. Select SAGE journal articles to support literature reviews and wider reading. Lesson Plan Activities by Ralph Manning support content-focused chapters and contain creative mathematics tasks across the primary age range. A Student Workbook is also available to accompany this book, including over 700 practice problems to help you understand, apply and teach primary mathematics. Derek Haylock is an education consultant and writer with a background in mathematics teaching, teacher education and classroom-based research in mathematics education. Ralph Manning is an independent consultant in primary education. He has worked as a primary teacher and as a lecturer in primary teacher education for 18 years, following a career in IT. *interactivity only available through VitalSource eBook

Number Calculations in Years 1 and 2

Mental Computation Using Natural Maths Strategies

Implications for mathematics education research, teaching and learning

Maths Express Year 5: Teachers' Resource Book

Mathematics Explained for Primary Teachers

Mentals

"This resource supports new and experienced educators who want to prepare for and design purposeful number talks for their students: the author demonstrates how to develop grade-level-specific strategies for addition, subtraction, multiplication, and division national standards, a DVD, reproducibles, bibliography, and index"--Provided by publisher.

Addition, Subtraction, and Problem Solving - Grade 3 Workbook

The audience remains much the same as for the 1992 Handbook, namely, mathematics education researchers and other scholars conducting work in mathematics education. This group includes college and university faculty, graduate students, investigators in research centers, and staff members at federal, state, and local agencies that conduct and use research within the discipline of mathematics. The intent of the authors of this volume is to provide useful perspectives as well as pertinent information for conducting in-depth research in mathematics education. This Handbook builds on the author's previous work. The Handbook should also be a useful textbook for graduate research seminars. In addition to the audience mentioned above, the present Handbook contains chapters that should be relevant to four other groups: teacher educators, curriculum developers, national policy makers, and test developers and others involved with assessment. Taken as a whole, the chapters reflect the mathematics education research community's willingness to accept the challenge of helping the public understand what mathematics education is about and what the relevance of their research findings might be for those outside their immediate community.

Interactive Mental Maths

Math Fact Fluency

For the Suffolk ENL Programme : Proposal for a New Teaching Programme for Mental Addition and Subtraction Strategies with Numbers Up to 100

Addition, Subtraction, and Problem Solving - Grade 3 Workbook

Mental Computation Strategies of Third Graders

Targeting Maths

Strategies for Addition & Subtraction Facts Within 18 is a second grade workbook which deals with two main themes: Mental math strategies for adding and subtracting within 0-20; such as adding just one more, a trick with nine and eight, and subtracting using addition. Memorizing the basic addition and subtraction facts of single-digit numbers. In the first several lessons we study basic strategies for adding and subtracting within 0-20, such as adding one more, a "trick" for adding 9 or 8, subtracting to 10, and subtracting using addition. After those, we study the idea of completing ten and going over. For example, the child adds $8 + 5$ by first adding $8 + 2$ (which makes 10), and then adding the 3 that was "left over". All of these lessons in the beginning part prepare the student for the next part of the workbook, which has to do with memorizing the basic addition facts. The next lessons in the workbook, Adding with 9, Adding with 8, Adding with 7, and Adding with 6, provide lots of practice for learning and memorizing the basic addition facts. There are 20 such facts: from $9 + 2$ to $9 + 9$: 8 facts (lesson Adding with 9) from $8 + 3$ to $8 + 8$: 6 facts (lesson Adding with 8) from $7 + 4$ to $7 + 7$: 4 facts (lesson Adding with 7) from $6 + 5$ to $6 + 6$: 2 facts (lesson Adding with 6) Some children will accomplish this more quickly and need less practice. Some will need more practice. You can also add in some Internet-based games (a list of online games is provided). Learning and memorizing the basic addition and subtraction facts of single-digit numbers is very important for later study. For example, regrouping (carrying/borrowing) in addition and in subtraction requires that the student is able to recall all the sums of single-digit numbers and corresponding subtraction facts efficiently and fluently. The goal is to memorize these facts, or at least become so fluent with them that an outsider cannot tell if the student remembers the answer or uses some mental math strategy to get the answer.

Practicing skills has never been so easy! This ready-to-use resource includes more than 40 fun practice pages. The simple directions and fun exercises make them perfect for kids to use independently in school or as homework. For use with Grade 3. With chapter sequencing following the new Curriculum, this book supports trainee Primary school teachers to make use of the opportunities presented in the new National Curriculum for effective and engaging Mathematics teaching. Covering all of the areas of the new Curriculum for primary mathematics and offering insight into effective teaching, this book helps students connect what they need to teach with how it can be taught. Exploring opportunities in the new curriculum for creative and imaginative teaching, it shows readers how to capitalize on opportunities to develop children's reasoning and problem solving skills. It explores how to make links between mathematics and children's lived experiences to enhance their learning and enables trainees to develop an ability to plan with discernment, making the most of existing thinking and research as well as building confidence in adapting and customizing ideas. Includes the full National Curriculum Programme of Study for Maths, key stages 1 and 2 as a useful reference for trainee teachers. Other books in this series include: Primary Science for Trainee Teachers and Primary English for Trainee Teachers

Mental Math, Grade 6
Smart Strategies for Basic Facts
A Project of the National Council of Teachers of Mathematics
Secrets of Mental Math
Helping Children Build Mental Math and Computation Strategies, Grades K-5
Mental Math, Grade 2

Following the great success of the earlier books, this fourth book in the Mathematics Recovery series equips teachers with detailed pedagogical knowledge and resources for teaching number to 7 to 11-year olds. Drawing on extensive programs of research, curriculum development, and teacher development, the book offers a coherent, up-to-date approach emphasising computational fluency and the progressive development of students' mathematical sophistication. The book is organized in key domains of number instruction, including structuring numbers 1 to 20, knowledge of number words and numerals, conceptual place value, mental computation, written computation methods, fractions, and early algebraic reasoning. Features include: " fine-grained progressions of instruction within each domain; " detailed descriptions of students' strategies and difficulties; " assessment tasks with notes on students' responses; " classroom-ready instructional activities; " an accompanying CD with extensive instructional resources. This book is designed for classroom and intervention teachers, special education teachers and classroom assistants. The book is an invaluable resource for mathematics advisors and coaches, learning support staff, numeracy consultants, curriculum developers, teacher educators and researchers.

Mastering the basic facts for addition, subtraction, multiplication, and division is an essential goal for all students. Most educators also agree that success at higher levels of math hinges on this fundamental skill. But what's the best way to get there? Are flash cards, drills, and timed tests the answer? If so, then why do students go into the upper elementary grades (and beyond) still counting on their fingers or experiencing math anxiety? What does research say about teaching basic math facts so they will stick? In Math Fact Fluency, experts Jennifer Bay-Williams and Gina Kling provide the answers to these questions—and so much more. This book offers everything a teacher needs to teach, assess, and communicate with parents about basic math fact instruction, including The five fundamentals of fact fluency, which provide a research-based framework for effective instruction in the basic facts. Strategies students can use to find facts that are not yet committed to memory. More than 40 easy-to-make, easy-to-use games that provide engaging fact practice. More than 20 assessment tools that provide useful data on fact fluency and mastery. Suggestions and strategies for collaborating with families to help their children master the basic math facts. Math Fact Fluency is an indispensable guide for any educator who needs to teach basic facts. This approach to facts instruction, grounded in years of research, will transform students' learning of basic facts and help them become more confident, adept, and successful at math.

Did you know that it's easier to add and subtract from left to right, rather than the other way round? And that you can be taught to square a three-digit number in seconds? In Think Like A Maths Genius, two mathematicians offer tips and tricks for doing tricky maths the easy way. With their help, you can learn how to perform lightning calculations in your head, discover methods of incredible memorisation and other feats of mental agility. Learn maths secrets for the real world, from adding up your shopping and calculating a restaurant tip, to figuring out gambling odds (or how much you've won) and how to solve sudoku faster.

60+ Games and Assessment Tools to Support Learning and Retention

Strategies and Process Skills to Develop Mental Calculation

Mental Math, Grade 5

Year 2

Think Like A Maths Genius

Strategies For Mental Math, Counting, Addition and Subtraction

'What a super book! It is absolutely packed with practical ideas and activities to help you love maths, and love teaching and/or learning it. It certainly helps to develop an enthusiasm for a subject most adults tend to say "I'm no good at..." - Early Years Educator 'A wonderful book, packed with practical ideas and activities to help all students love maths.' - Jo Boaler, Professor of Mathematics Education, Stanford University Fostering an enthusiasm for mathematics in young children is a vital part of supporting their mathematical development. Underpinned by subject and pedagogical knowledge, case studies and research-based perspectives, the authors provide clear guidance on how to support young children's learning and understanding in an effective and engaging way. Contemporary approaches to developing essential mathematical learning for young children are explored, including: play, practical activities and talk for mathematics outdoor learning understanding pattern counting, calculation and place value measures and shape problem solving and representing mathematics assessment working with parents. Written for both trainees and practitioners working with children aged 0 to 8 years, including those studying for Early Years and Early Childhood degrees and those on Primary PGCE and Primary Education courses, this book offers mathematical subject knowledge and teaching ideas in one volume. Helen Taylor is Course Leader of PGCE Primary Part-time Mathematics at Canterbury Christ Church University. Andrew Harris is Course Leader of PGCE Modular Mathematics at Canterbury Christ Church University.