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# Word Problems For Gifted Students

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Math Problem Solvers  
Extreme Math  
Practice Operations  
Motivating Gifted Students  
Challenge Math  
Practice Combinatorics  
Word Problems  
Brain Power Enrichment: Level One, Book One - Teacher Version Grades 4 to 6  
Math Curriculum for Gifted Students  
Math Curriculum for Gifted Students  
Competitive Mathematics for Gifted Students - Level 1 Combo  
Place Value  
Practice Arithmetic  
Creativity in Mathematics and the Education of Gifted Students  
Ana, Boris, and Balloons 1: Comparison Problems  
Summer Activities for the Gifted Student, Grade 3  
Enrichment Activities for Gifted Students  
Problems to Think  
Math Curse  
Project-Based Learning in the Math Classroom  
Practice Arithmetic and Number Theory  
Practice Combinatorics and Probability  
PSAT / NMSQT For Dummies  
The Big Logic Puzzle Extravaganza for Gifted and Talented Children  
Practice Word Problems  
Blockhead  
Math Curriculum for Gifted Students, Grade 3  
A Teacher's Toolbox for Gifted Education  
Exceptionally Gifted Children  
Differentiated Instruction for the Middle School Math Teacher  
Mathematical Stories I - Graphs, Games and Proofs  
Practice Word Problems  
Primary Grade Challenge Math  
On-the-Job Math Mysteries  
Mathability  
Twice-Exceptional Gifted Children  
Instructor's Guide for Beyond Problem Solving and Comprehension  
Practice Arithmetic  
Practice Operations and Algebra  
Practice Geometry

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**LEON ALEAH**


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*Math Problem Solvers*

Routledge

Research by cognitive psychologists and mathematics educators has often been compartmentalized by departmental boundaries. *Word Problems* integrates this research to show its relevance to the debate on the reform of mathematics education. Beginning with the different knowledge structures that represent rule learning and conceptual learning, the discussion proceeds to the application of these ideas to solving word problems. This is followed by chapters on elementary, multistep, and algebra problems, which examine similarities and differences in the cognitive skills required by students as the problems become more complex. The next section, on abstracting, adapting, and representing solutions, illustrates different ways in which solutions can be transferred to related problems. The last section focuses on topics emphasized in the NCTM Standards and concludes with a chapter that evaluates some of the programs on curriculum

reform.

*Extreme Math* Routledge  
*Enrichment Activities for Gifted Students* outlines a variety of extracurricular academic activities and programming options for gifted student talent development. This book: Includes strategies for educators to develop enrichment programs that fit the needs of their students. Provides numerous examples of nationally-recognized and easy-to-implement programs and competitions. Helps promote students' academic growth. Categorizes options by subject area, including math, science, technology, language arts, and social studies. Categorizes options by skill type, including creative thinking, problem solving, and adaptability. *Enrichment Activities for Gifted Students* provides everything busy educators need to know about offering, funding, and supporting enrichment activities and programs that develop students' content knowledge and expertise, build valuable real-world skills, and extend learning beyond the walls of the classroom.

**Practice Operations**

Taylor &amp; Francis

About "Competitive Mathematics for Gifted Students" This series provides practice materials and short theory reminders for students who aim to excel at problem solving. Material is introduced in a structured manner: each new concept is followed by a problem set that explores the content in detail. Each book ends with a problem set that reviews both concepts presented in the current volume and related topics from previous volumes. The series forms a learning continuum that explores strategies specific to competitive mathematics in depth and breadth. Full solutions explain both reasoning and execution. Often, several solutions are contrasted. The problem selection emphasizes comprehension, critical thinking, observation, and avoiding repetitive and mechanical procedures. Ready to participate in a math competition such as AMC-8, AMC-10, Math Kangaroo in USA, Math Leagues, USAMTS, or AIME? This series will open the doors to consistent performance. About Level 3 This level of the series is designed for students who can solve linear equations, are

fluent with fractions, and can factor into primes. The problem sets are designed to strengthen specific areas where we know students have difficulty on AMC-8 and AMC-10. The level 3 books are a strong preparation for AMC-8 and a partial preparation for AMC-10 and AIME. Level 3 consists of: Word Problems (volume 9), Arithmetic and Number Theory (volume 10), Operations and Algebra (volume 11), Geometry (volume 12), and Combinatorics (volume 13). On the contest list for this level: MATHCOUNTS, Math Kangaroo levels 5-6 and 7-8, MOEMS-M, Purple Comet, AMC-8, AMC-10. Their complexity makes these problem sets useful for preparing the AIME in the long run. About Volume 13 - Combinatorics and Probability This workbook presents a variety of problems that explore the most basic discrete counting techniques: permutations and combinations. The topics included are competition specific.

**Motivating Gifted Students** Routledge Brain Power Enrichment Programs aim to develop problem-solving abilities in students who wish to

improve their skills. Additionally, the programs may provide challenging, stimulating and inspirational learning experiences through engagement with problem solving for gifted students. The Student Version book accompanies a Level One student through his/her first semester of the problem solving program (or it may be used independently as a problem solving workbook). However, this Teacher Version may be used by a teacher or tutor as it has, in addition to the content of the Student Version, short instructions for each lesson as well as answers to problems. All Brain Power programs are based on a step-by-step approach, which enables students to understand problems of increasing complexity. Level One begins to equip students typically in grades 4 to 6 with various problem solving strategies and techniques, and supports the application of these skills to math, language arts, study habits and the general learning process. In Level One, students are introduced to four critical steps in problem solving: 1) Understanding the problem 2) Defining a plan or strategy 3) Solving

the problem 4) Checking the answer. The implications for improving one's problem solving skills are numerous. These include a more positive attitude toward math and science, improved thinking flexibility and creativity in all subject areas, as well as increased success in academic, gifted, university admissions, and professional program tests (many of which are designed with an emphasis on assessing higher-order thinking skills). Moreover, knowledge of a range of problem solving strategies, coupled with experience in their application, have benefits which transcend the classroom and enter the realm of professional, social and intellectual accomplishment. Challenge Math John Wiley & Sons 2nd Edition - 2014 About "Competitive Mathematics for Gifted Students" This series provides practice materials and short theory reminders for students who aim to excel at problem solving. Material is introduced in a structured manner: each new concept is followed by a problem set that explores the content in detail. Each book ends

with a problem set that reviews both concepts presented in the current volume and related topics from previous volumes. The series forms a learning continuum that explores strategies specific to competitive mathematics in depth and breadth. Full solutions explain both reasoning and execution. Often, several solutions are contrasted. The problem selection emphasizes comprehension, critical thinking, observation, and avoiding repetitive and mechanical procedures. Ready to participate in a math competition such as MOEMS, Math Kangaroo in USA, or Noetic Math? This series will open the doors to consistent performance. About Level 2 This level of the series is designed for students who know the multiplication tables, integer division with remainder and basic operations with decimals. Our level 1 books explain concepts that may need review before attempting level 2. Level 2 books are suitable for preparing Math Kangaroo 3-4 and MOEMS-E. Many of the concepts presented, however, reach much farther into the AMC-8 level. Level 2 consists of: Word Problems (volume 5), Operations (volume 6),

Arithmetic (volume 7), and Combinatorics (volume 8). About Volume 8 - Combinatorics We continue the study of counting from the level 1 books. We start introducing sets. The study of sets will continue over the next levels, each time introducing more concepts. We continue with a thorough practice of the last digit of a product or sum and we introduce applications of the Pigeonhole principle. Next, we introduce the notion of a factorial and apply it to arrangements. We conclude with a section on dominoes and square tables. This book is rich in strategies and variety.

**Practice Combinatorics**  
Routledge

Offers a higher level of material that goes beyond calculation skills for children in the primary grades.

**Word Problems**

Psychology Press  
About "Competitive Mathematics for Gifted Students" This series provides practice materials and short theory reminders for students who aim to excel at problem solving. Material is introduced in a structured manner: each new concept is followed by a problem set that

explores the content in detail. Each book ends with a problem set that reviews both concepts presented in the current volume and related topics from previous volumes. The series forms a learning continuum that explores strategies specific to competitive mathematics in depth and breadth. Full solutions explain both reasoning and execution. Often, several solutions are contrasted. The problem selection emphasizes comprehension, critical thinking, observation, and avoiding repetitive and mechanical procedures. Ready to participate in a math competition such as MOEMS, Math Kangaroo in USA, or Noetic Math? This series will open the doors to consistent performance. About Level 2 This level of the series is designed for students who know the multiplication tables, integer division with remainder and basic operations with decimals. Our level 1 books explain concepts that may need review before attempting level 2. Level 2 books are suitable for preparing Math Kangaroo 3-4 and MOEMS-E. Many of the concepts presented, however, reach much farther into the AMC-8 level. Level 2 consists of:

Word Problems (volume 5), Operations (volume 6), Arithmetic (volume 7), and Combinatorics (volume 8). About Volume 6 - Operations This volume assumes a knowledge of fractions. Our goal is to explore the flexibility of the order of operations and to discover efficient and reliable ways to handle numbers. The problems provide a variety of ways to look at irreducible fractions, operations with repdigits, expressions, identities and equations. At this level, we already make a distinction between linear equations (handled by solving backwards or by using simple algebra) and Diophantine equations (handled using number theoretical methods). The study of Diophantine equations will continue at the next levels, but it is started here in the most elementary way. A short review of measurement is provided as a reminder. Problems avoid the repetition of the same context, thus providing a challenging solving experience.

*Brain Power Enrichment: Level One, Book One - Teacher Version Grades 4 to 6* Routledge  
About "Competitive Mathematics for Gifted

Students" This series provides practice materials and short theory reminders for students who aim to excel at problem solving. Material is introduced in a structured manner: each new concept is followed by a problem set that explores the content in detail. Each book ends with a problem set that reviews both concepts presented in the current volume and related topics from previous volumes. The series forms a learning continuum that explores strategies specific to competitive mathematics in depth and breadth. Full solutions explain both reasoning and execution. Often, several solutions are contrasted. The problem selection emphasizes comprehension, critical thinking, observation, and avoiding repetitive and mechanical procedures. Ready to participate in a math competition such as AMC-8, AMC-10, Math Kangaroo in USA, Math Leagues, USAMTS, or AIME? This series will open the doors to consistent performance. About Level 3 This level of the series is designed for students who can solve linear equations, are fluent with fractions, and can factor into primes.

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### **Math Curriculum for Gifted Students**

PRUFROCK PRESS INC.  
Differentiated Instruction for the Middle School Math Teacher is a practical and easy-to-use resource for teaching a standards-based math curriculum to all learners. It gives you effective ways to present math concepts,

shows how to provide opportunities for guided practice, and offers ideas for modifying the material to provide access to the same content standard for all students in the inclusive classroom. This book also contains key strategies for collaborating with other professionals, suggestions for involving the students' families by tying math concepts to students' everyday lives, and valuable assessment strategies. The lessons in the book cover middle school math topics correlated to the standards of the National Council of Teachers of Math, ranging from numbers and operations to problem solving and reasoning. Each lesson includes: Instructions for presenting the lesson to the whole class  
Worksheets designed to help review and reinforce the concepts presented in each lesson  
A section on how to adapt the lesson for the inclusive classroom, including descriptions of different stations for different learners  
A home-school connection with family-based everyday math activities  
Suggestions for how to assess students' grasp of the concepts presented in the lesson

Math Curriculum for Gifted Students Springer Nature

"Use this activity book to enrich your 2nd and 3rd grade students' mathematics curriculum or simply as a set of challenging tasks to offer occasionally as a supplement to their learning."--P. 1.

**Competitive Mathematics for Gifted Students - Level 1**

**Combo** Ezramath: Early Education

Learning doesn't have to stop when summer begins. Summer Activities for the Gifted Student offers thought-provoking exercises designed to challenge your advanced learner during the vacation months. Reading passages present new vocabulary, math problems encourage critical-thinking skills, and writing exercises promote creativity. Science and social studies activities introduce new concepts and test analytical skills. This workbook will challenge your student to continue learning long after school is out. Summer Activities for the Gifted Student features: Exercises that encourage higher-order thinking skills such as analyzing, synthesizing, and evaluating information

Activities in a variety of formats, including crossword puzzles, word searches, reading comprehension passages, and writing exercises Full-color illustrations and diagrams that bring concepts to life Perforated pages for on-the-go practice

Place Value Routledge

The book carries 50 problems and prepares students for the Common Core challenges in Math and reading. The problems in this book are specially designed to concentrate students' attention on math vocabulary. "Ana, Boris, and Balloons" series develops children's word-problem comprehension and critical thinking. Children solve problems using either coins or picture models. In addition, children are prompt to create number sentences that reflect their solutions. Advanced students have an opportunity to work on early algebra topics. Students are prompt to find algebraic sentences relevant for the problems in a group of four equations or/and inequalities. "Ana, Boris, and Balloons" books are geared toward elementary school students. By helping

children to develop their informative reading comprehension, the books prepare them for the challenges of common core curriculum. Ana, Boris, and Balloons problems were successfully utilized in Stella Academy learning center (Wheeling, IL) with bilingual students, beginning readers, gifted students, and students with learning disabilities. Some students were in first grade while others in third or fourth grade. Four-level assignments make book adaptable for the needs of students with various level of abilities and preparedness. "Ana, Boris, and Balloons" books can be used in math classes with students of various abilities and as a resource for enrichment STEM activities. The books subdivide word problems into elementary logical components (part-part-difference, part-part-total, and change problems) and teaches each component by piecemeal. The approach is based on ideas of Maria Montessori, Ference Marton, and Lev Vygotskiy. The books provide answers to all the problems and are available in a form of workbooks in colored and 'black and white' versions. Abridged versions are

available as Kindle e-books. *Practice Arithmetic* Taylor & Francis With the help of tried and tested, carefully elaborated learning units, the authors convey fundamental mathematical techniques in this essential, which are important far beyond primary school. In the present volume I, path problems and word puzzles are modeled and solved using undirected and directed graphs. Simple math games are systematically analyzed and the optimal strategies are determined. Students learn to gradually reduce difficult problems to simpler ones and to provide evidence in different contexts. The tasks encourage mathematical thinking, imagination and creativity. The detailed sample solutions are designed for non-mathematicians. This book is a translation of the original German 1st edition *Mathematische Geschichten I – Graphen, Spiele und Beweise* by Susanne Schindler-Tschirner and Werner Schindler, published by Springer Fachmedien Wiesbaden GmbH, part of Springer Nature in 2019. The translation was done

with the help of artificial intelligence (machine translation by the service DeepL.com). A subsequent human revision was done primarily in terms of content, so that the book will read stylistically differently from a conventional translation. Springer Nature works continuously to further the development of tools for the production of books and on the related technologies to support the authors. [Creativity in Mathematics and the Education of Gifted Students](#) Author House *Project-Based Learning in the Math Classroom: Grades 3–5* explains how to keep inquiry at the heart of mathematics teaching in the upper elementary grades. Helping teachers integrate other subjects into the math classroom, this book outlines in-depth tasks, projects and routines to support Project-Based Learning (PBL). Featuring helpful tips for creating PBL units, alongside models and strategies that can be implemented immediately, *Project-Based Learning in the Math Classroom: Grades 3–5* understands that teaching in a project-

based environment means using great teaching practices. The authors impart strategies that assist teachers in planning standards-based lessons, encouraging wonder and curiosity, providing a safe environment where mistakes can occur, and giving students opportunities for revision and reflection.

Ana, Boris, and Balloons 1: Comparison Problems

John Wiley & Sons

Did you ever wake up to one of those days where everything is a problem? You have 10 things to do, but only 30 minutes until your bus leaves. Is there enough time? You have 3 shirts and 2 pairs of pants. Can you make 1 good outfit? Then you start to wonder: Why does everything have to be such a problem? Why do 2 apples always have to be added to 5 oranges? Why do 4 kids always have to divide 12 marbles? Why can't you just keep 10 cookies without someone taking 3 away? Why? Because you're the victim of a Math Curse. That's why. But don't despair. This is one girl's story of how that curse can be broken.

**Summer Activities for the Gifted Student, Grade 3** BRILL

The Math Curriculum for Gifted Students series: Provides gifted and advanced learners with challenging activities to extend their mathematical thinking. Includes lessons, activities, and extensions that are aligned to national standards. Is designed to provide high-ability learners advancement beyond the general curriculum. Is ideal for gifted classrooms or gifted pull-out groups. Was developed by the Center for Gifted Education at William & Mary. In Math Curriculum for Gifted Students (Grade 3), the 21 lessons cover mathematics content for grade 3 and are divided into five sections: number and operations in Base Ten, operations and algebraic thinking, number and operations-fractions, measurement and data, and geometry. Each lesson includes a teacher page that outlines the estimated time, key terms, materials, and objectives; a challenging activity to allow students to explore the concepts in depth; practice problems; and an assessment similar to standards-based grade-level standardized assessments. Optional Student Workbook Packs In addition to this

teacher's guide, companion student workbooks are available in sets of 5, which cover number/operations in Base Ten and operations/algebraic thinking ( Grade 3 *Enrichment Activities for Gifted Students* CreateSpace The fast and easy way to ace the PSAT/NMSQT exam Similar to the SAT, the PSAT/NMSQT measures critical reading skills, math problem-solving skills, and writing skills. The tips and plain-English information presented in PSAT/NMSQT For Dummies are designed to give readers of all skill levels the edge they need to perform their best on this important exam. Here, you'll find the easy-to-understand information you need to prepare for the PSAT/NMSQT. You'll get a review of foundational concepts for every section, from identifying root words and correctly using commas, to solving math word problems and using the quadratic formula. Plus, four full-length practice tests with detailed answers and explanations help you assess your skills as you prep for exam day. So what are you waiting for? Includes a review of

foundational concepts for every section Practice problems for each of the test's three sections allow you to test your comprehension as you study Includes four full-length practice tests with detailed answers and explanations If you're one of the 3.5 million students preparing for the PSAT/NMSQT exam, this hands-on guide has everything you need to score your highest!

### **Problems to Think**

Routledge

Exceptionally Gifted Children examines the origin, development and school histories of fifteen Australian children who are amongst the most intellectually gifted young people ever to be identified and studied. The first phase of a longitudinal research project which will trace the children through to adulthood, this book looks in detail at the children's early lives and influences, their families and personal characteristics. More importantly, this book explores the school experiences of the children, the opportunities offered and denied to them and the effects of their early school life on their educational development and how the school environment can

affect: \* self-esteem \* self-concept \* motivation \* the capacity to find and form friendships \* the children's own attitudes towards their abilities and achievements. This fascinating study will be of interest to education researchers, those working in special educational needs, and anyone with a particular interest in this field.

**Math Course** Routledge Mathability gives students the experience and ability to analyze and solve real-life mathematical problems, and explain their methods for arriving at the solution. Mathability is an excellent resource for preparing students for the performance tasks of standards-based tests. The six units in this book each have 10 problems that deal with a variety of real-life situations, such as those at a construction site, on vacation, in a business, and at home. The open-ended problems let students hone their skills in geometry, probability, percentages, use of charts, algebra, number relations/operations, money, and decimals. Open-ended performance tasks have become a mainstay of standards-based testing. It is one of

the tasks that most students perform at below proficiency level. Much of this low performance is due to a student's lack of experience with writing explanations of the mathematics that made it possible to solve the problem. Mathability presents a systematic approach that will lead students to proficiency. Within each unit, this book provides four different levels of problems. The Step-by-Step Level leads a student through the problem and provides a format for presenting their answers. The Prompted Level provides the format for presenting the solution and hints on how to solve the problem. The Independent Level allows students to solve and explain their answers on their own, and the Challenge Level problems present a venue for gifted and talented students to push their skills to a higher level. Grades 5-8 [Project-Based Learning in the Math Classroom](#) Flash Kids Imagine your students tackling math word problems drawn from the extreme sports of polar ice swimming, scuba diving, and adventure racing. World champion athletes (like Erik

Weihenmeyer, the first blind man to climb Mount Everest) present real math problems they face while scaling peaks, hang gliding off cliffs, kayaking over waterfalls, riding raging bulls, and plunging down steep cliffs on mountain bikes. Taught by the athletes, using basic multiplication, division, fractions, and percentages, your students will figure out that math is essential even in the world of extreme sports . . . and it can be fun! Activities include: Polar bear swimmers: How many

strokes will it take us to swim across this hole in the ice? Master skydiver: How many miles have we fallen so far? Master scuba divers: How long will our air tanks last at 99 feet under water? World champion kayaker: How tall is this waterfall, anyway? High school rodeo champion: How much money do I get if I win? World champion adventure racer: How many calories do we need to pack for a 6-day race across glaciers, arid peaks, thick brush, and mangrove swamps? Master hang glider: How

do you get this thing to go down? Like the authors' previous book, the best-selling Real Life Math Mysteries, the word problems in this book are real, alive, and clearly focused. Each problem is provided on a reproducible handout and includes problem-solving suggestions with a comprehensive answer key. Many of the athletes share their thoughts and encouragement to study hard in school. All activities are tied to the standards established by the National Council of Teachers of Mathematics.