



Colegio de San Juan de Letran
Dominican Avenue, Abucay, Bataan
Library and Media Services

RESEARCH GUIDE: MATHEMATICS 7

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RESEARCH GUIDES

INTEGRATED MATHEMATICS 7

I. SCOPE NOTE

Integrated mathematics is the term used to describe the style of mathematics education which integrates multiple strands of mathematic. mathnasium.com

II. SEARCH AIDS (BT: Broader Term, RT: Related Term, NT: Narrow Term)

BT:

- Algebra
- Geometry
- Statistics
- Probability

RT:

- Numbers
- Number Sense
- Measurement
- Patterns

NT:

- Sets
- Real Number System
- Conversion of Units of Measurements
- Algebraic Expressions
- Properties of Real Numbers
- Linear Equations
- Polygons
- Inequalities in One Variable
- Data Collection
- Presentation
- Measures of Central Tendency
- Variability

III. INFORMATION RESOURCES

A. LIBRARY RESOURCES

Note: For the appropriate access credentials, please contact the Letran Bataan Library

➤ **E-BOOKS**

- The Math Teacher's Book of Lists.
https://www.proquest.com/publication/publications_40088?accountid=190548
- The Princeton Companion to Mathematics.
https://www.proquest.com/publication/publications_54984?accountid=190548

➤ **E-JOURNALS**

- The Journal of Educational Research.
https://www.proquest.com/publication/publications_40761?accountid=190548
- Mathematical Thinking and Learning.
https://www.proquest.com/publication/publications_42534?accountid=190548
- The High School Journal.
https://www.proquest.com/publication/publications_542?accountid=190548
- Teacher Education Quarterly.
https://www.proquest.com/publication/publications_48404?accountid=190548
- Educational Studies in Mathematics.
https://www.proquest.com/publication/publications_2043786?accountid=190548
- International Journal of Mathematics and Mathematical Sciences.
https://www.proquest.com/publication/publications_237262?accountid=190548
- Journal for Mathematics Teacher Education.
https://www.proquest.com/publication/publications_2043845?accountid=190548
- Journal for Research in Mathematics Education.
https://www.proquest.com/publication/publications_21451?accountid=190548
- The American Mathematical Monthly.
https://search.proquest.com/central/publication/publications_47349
- The International Journal for Technology in Mathematics Education.
https://search.proquest.com/central/publication/publications_29124
- The Mathematics Teacher.
<https://search.proquest.com/docview/204623708?accountid=190548>
- School Science and Mathematics.
<https://search.proquest.com/docview/195227112?accountid=190548>
- Mathematics Teaching in the Middle School.
<https://search.proquest.com/docview/231078280?accountid=190548>

➤ **E-THESES**

- Weber, N. A. (2019). Perceptions of self-efficacy in high-school geometry students (Order No. 13883365). Available from ProQuest Central. (2276828187). Retrieved from <https://www.proquest.com/dissertations-theses/perceptions-self-efficacy-high-school-geometry/docview/2276828187/se-2?accountid=190548>
- Worry, V. A. (2011). A comparison of high school geometry student performance and motivation between traditional and project-based instruction techniques (Order No. 3478823). Available from ProQuest Central. (904107087). Retrieved from <https://www.proquest.com/dissertations-theses/comparison-high-school-geometry-student/docview/904107087/se-2?accountid=190548>
- Ichinose, C. L. (2011). Learning mathematics in the 21st century: High school students' interactions while learning mathematics online (Order No. 3473431). Available from ProQuest Central. (897648070). Retrieved from <https://www.proquest.com/dissertations-theses/learning-mathematics-21-sup-st-century-high/docview/897648070/se-2?accountid=190548>
- Vens, K. A. (2019). The creativity of junior high and high school mathematics teachers (Order No. 27603042). Available from ProQuest Central. (2327378763). Retrieved from <https://www.proquest.com/dissertations-theses/creativity-junior-high-school-mathematics/docview/2327378763/se-2?accountid=190548>
- Cannon, M. N. (2021). Young adolescents' opportunity to develop concept images of polygons in middle school mathematics textbooks (Order No. 28322708). Available from ProQuest Central. (2516753662). Retrieved from <https://www.proquest.com/dissertations-theses/young-adolescents-opportunity-develop-concept/docview/2516753662/se-2?accountid=190548>
- Perez, B. (2013). Teacher quality and teaching quality of 7th-grade algebra I honors teachers (Order No. 3571434). Available from ProQuest Central. (1426424569). Retrieved from <https://www.proquest.com/dissertations-theses/teacher-quality-teaching-7th-grade-algebra-i/docview/1426424569/se-2?accountid=190548>
- Strickland, T. K. (2011). The effects of blended instruction and visual representations on area problems involving quadratic expressions for secondary students with mathematics learning difficulties (Order No. 3478903). Available from ProQuest Central. (904163681). Retrieved from <https://www.proquest.com/dissertations-theses/effects-blended-instruction-visual/docview/904163681/se-2?accountid=190548>
- Thomsen, B. M. (2017). Strength in numbers: How computational estimation impacts mathematics achievement of high school students with and without disabilities (Order No. 10642499). Available from ProQuest Central. (2002577318). Retrieved from <https://www.proquest.com/dissertations-theses/strength-numbers-how-computational-estimation/docview/2002577318/se-2?accountid=190548>
- Gantz, L. A. G. (2010). Handheld computer algebra systems in the pre-algebra classroom (Order No. 3406562). Available from ProQuest Central. (276246971).

- Retrieved from <https://search.proquest.com/docview/276246971?accountid=190548>
- Stockman, M. (2016). Predictive validity of local algebra benchmark assessments for maryland algebra high school assessment (Order No. 10130169). Available from ProQuest Central. (1816212938). Retrieved from <https://search.proquest.com/docview/1816212938?accountid=190548>
 - Darling, E. J. S. (2010). Access to algebra I, gateway to success: The impact of eighth -grade algebra I (Order No. 3410178). Available from ProQuest Central. (496927273). Retrieved from <https://search.proquest.com/docview/496927273?accountid=190548>
 - Hayward, P. A. (2018). Student attitudes and algebra: Examining high school students' lived experiences in a caring social constructivist algebra classroom (Order No. 10983821). Available from ProQuest Central. (2102039029). Retrieved from <https://search.proquest.com/docview/2102039029?accountid=190548>
 - Ainsworth, J. M. (2016). The predictive validity of coordinate algebra common district assessments on high-stakes coordinate algebra end of course assessment (Order No. 10109224). Available from ProQuest Central. (1795577806). Retrieved from <https://search.proquest.com/docview/1795577806?accountid=190548>

B. OPEN ACCESS

➤ FREE E-BOOKS

- Krishnamoorthy, Vinod (2018). *Competitive Math for Middle School: Algebra, Probability, and Number Theory*. Singapore: Pan Stanford Publishing Pte. Ltd.
<https://www.pdfdrive.com/competitive-math-for-middle-school-algebra-probability-and-number-theory-e158234147.html>
- Libby, Jim (2017). *Math for Real Life Teaching Practical Uses for Algebra Geometry and Trigonometry*. Jefferson, NC: McFarland & Company.
<https://www.pdfdrive.com/math-for-real-life-teaching-practical-uses-for-algebra-geometry-and-trigonometry-e176119070.html>
- Linker, David, Sultan, Alan (2016). *Mathematics Problem-Solving Challenges for Secondary School Students and Beyond*. New Jersey: World Scientific.
<https://www.pdfdrive.com/mathematics-problem-solving-challenges-for-secondary-school-students-and-beyond-e185309594.html>
- Batanero, Carmen & Borovcnik, Manfred (2016). *Statistics and Probability in High School*. The Netherlands: Sense Publishers.
<https://www.pdfdrive.com/statistics-and-probability-in-high-school-d158100496.html>
- Wilder, Sue Johnston, et al. (Ed.) (2011). *Learning to Teach Mathematics in the Secondary School*. (3rd ed.). London: Routledge.
<https://www.pdfdrive.com/learning-to-teach-mathematics-in-the-secondary-school-a-companion-to-school-experience-learning-to-teach-subjects-in-the-secondary-school-series-e157205364.html>

- Downing, Douglas (2009). *Dictionary of Mathematics Terms*. (3rd ed.) New York: Barron's Educational Series, Inc.
<https://www.pdfdrive.com/dictionary-of-mathematical-terms-e19143533.html>
- Small, Christopher G. (2007). *Functional Equations and How to Solve Them*. New York: Springer Science+BusinessMedia.
<https://www.pdfdrive.com/functional-equations-and-how-to-solve-them-problem-books-in-mathematics-e159457194.html>
- Lang, Serge, Murray, Gene (1988). *Geometry: A High School Course* (2nd ed.). New York: Springer Science+BusinessMedia.
<https://www.pdfdrive.com/geometry-a-high-school-course-d157703589.html>
- Strang, Gilbert. (2011). *Linear Algebra and Its Applications*. 4th ed.
<https://www.pdfdrive.com/linear-algebra-and-its-applications-d442270.html>
- Knapp, Anthony W. (2007). *Advanced Algebra Along with a companion volume Basic Algebra*. Boston: Birkhauser <https://www.pdfdrive.com/advanced-algebra-along-with-acompanion-volume-basic-algebra-d157635010.html>
- (2018). *Mathematics: Grade 7*. Mauritius Institute of Education.
<https://fliphtml5.com/bookcase/mejpx>
- (2019). *Mathematics part 1: Grade 7*. Mauritius Institute of Education.
<https://fliphtml5.com/bookcase/teyhq>
- (2019). *Mathematics part 2: Grade 7*. Mauritius Institute of Education.
<https://fliphtml5.com/bookcase/teyhq>
- Philippines: *Mathematics for Grade 7*.
<https://numberbender.com/subjects/view/philippines:%20%20mathematics%20for%20grade%207/all>

➤ FREE E-JOURNALS

- Journal of Algebra. <https://www.journals.elsevier.com/journal-of-algebra>
- Algebra. <https://www.hindawi.com/journals/algebra/>
- Journal of Algebra and its Application. <https://www.worldscientific.com/worldscinet/jaa>
- Mathematics: Open Access Journal. <https://www.mdpi.com/journal/mathematics>
- The Journal of Mathematical Behavior. <https://doi.org/10.1016/j.jmathb.2020.100776>

➤ FREE E-THESES

- Wienekus, G. R. (2021). *How selected Grade 7 participants develop conceptual understanding in solving algebraic problems as a result of participating in a screencast intervention*. (Thesis). Rhodes University. Retrieved from <http://hdl.handle.net/10962/176833>
- Borg, P. (2017). *Using the computer as a tool for constructivist teaching: a case study of Grade 7 students developing representations*

- and interpretations of mathematical notation when using the software Grid Algebra.* (Thesis). Loughborough University. Retrieved from <http://hdl.handle.net/2134/32717>
- Arnold, E. G. (2016). *Investigating the teaching of statistics with technology at the high school level through the use of annotated lesson plans.* (Doctoral Dissertation). Montana State University. Retrieved from <https://scholarworks.montana.edu/xmlui/handle/1/12360>
 - Rodriguez, C. J. (2013). *Applied statistics in the classroom.* (Masters Thesis). University of Texas – Austin. Retrieved from <http://hdl.handle.net/2152/22620>
 - Shang-Guan, W. (2010). *A Content Analysis Study on Middle School Curriculum Standards (by grade) of Types of Equal Sign.* (Thesis). NSYSU. Retrieved from http://etd.lib.nsysu.edu.tw/ETD-db/ETD-search/view_etd?URN=etd-0623110-113521
 - Thomas, C. (2010). *Fraction competency and algebra success.* (Master's Thesis). Louisiana State University. Retrieved from etd-08242010-140559 ; https://digitalcommons.lsu.edu/gradschool_theses/3578
 - Barber, R. V. (2016). *Low-Dimensional Reality-Based Algebras.* (Master's Thesis). Encompass Digital Archive, Eastern Kentucky University. Retrieved from <https://encompass.eku.edu/etd/336>
 - Ender, C. F. (2019). *Post-Lie algebra structures on classes of Lie algebras.* (Thesis). University of Vienna. Retrieved from <http://othes.univie.ac.at/57015/>
 - Hmaida, M. M. A. (2016). *Representation theory of algebras related to the bubble algebra.* (Doctoral Dissertation). University of Leeds. Retrieved from <http://etheses.whiterose.ac.uk/15987/> ; <https://ethos.bl.uk/OrderDetails.do?uin=uk.bl.ethos.701723>
 - Walick, C. (2015). *A Proposed Algebra Problem-Analysis Model.* (Doctoral Dissertation). University of Minnesota. Retrieved from <http://hdl.handle.net/11299/175555>

C. PROFESSIONAL ORGANIZATIONS

- Mathematical Society of the Philippines <https://www.mathsociety.ph/>
- National Council of Teachers of Mathematics. <https://www.nctm.org/>
- Association of Mathematics Teacher Educators. <https://www.amte.net/>
- Mathematical Association of America. <https://www.maa.org/programs-andcommunities/member-communities-high-school-teachers>
- American Mathematical Society. <http://www.ams.org/programs/students/for-teachers-parents>
- Association of Teachers of Mathematics. <https://www.atm.org.uk/>

D. OTHER RELATED WEB PORTALS

- Khan Academy. <https://www.khanacademy.org/math/algebra>
- Common Sense. <https://www.commonsense.org/education/top-picks/awesome-algebra-appsand-websites>
- Bright Storm. <https://www.brightstorm.com/math/algebra/>

- Math Planet. <https://www.mathplanet.com/education/algebra-1>
- Cool Math. <https://www.coolmath.com/algebra>
- Algebra Class. <https://www.algebra-class.com/algebra-websites.html>
- Math Way. <https://www.mathway.com/>
- Free Math Help. <https://www.freemathhelp.com/algebra-help.html>
- Math is Fun. <https://www.mathsisfun.com/algebra/index.html>

E. RELATED RESEARCH GUIDES

- Queens University Library. <https://guides.library.queensu.ca/education/is-guides>
- University of Nebraska Kearney. <https://guides.library.unk.edu/c.php?g=510591&p=4408135>
- Loyola University of Chicago. <https://libguides.luc.edu/c.php?g=49784&p=320650>

IV. TUTORIALS

- Polygons. Grade 7 Mathematics. <https://www.youtube.com/watch?v=kTT8Do7oLMs>
- Absolute Value of a Number. Grade 7 Mathematics. <https://www.youtube.com/watch?v=dVNwrDbgdes>
- Measures of Weight, Length and Capacity (Metric System) <https://www.youtube.com/watch?v=cZwMDYDpXX4>
- Introduction to Statistics. Grade 7 Mathematics. <https://www.youtube.com/watch?v=v0Alj6GyKvU>
- Theoretical and Experimental Probability. <https://www.youtube.com/watch?v=tHYBXwg1UtA>
- Measures of Central Tendency of Ungrouped Data (Grade 7) https://www.youtube.com/watch?v=31u_VsT1tBw
- Conversion Series. Metric System Conversion (Metric to Metric) <https://www.youtube.com/watch?v=QTHp3ZpAOys>
- Illustrating Linear Equations and Inequalities in One Variable. <https://www.youtube.com/watch?v=Ik5GIGKAkgw>
- Solving Linear Inequalities in One Variable <https://www.youtube.com/watch?v=h2YMbYz9aW0>
- Analyze Math. <https://www.analyzemath.com/Algebra1/Tutorials.html>
- Purple Math. <https://www.purplemath.com/modules/>
- Interactive Mathematics. <https://www.intmath.com/basic-algebra/basic-algebra-intro.php>
- Study Pug. <https://www.studypug.com/ca/grade7>
- Online Math Learning. <https://www.onlinemathlearning.com/grade-7.html>
- Kids Math TV. <https://www.kidsmathtv.com/7th-grade-videos/>
- West Contra Costa. <https://www.wccusd.net/Page/3222>