



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

## **RESEARCH GUIDE: MATHEMATICS 8**

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## RESEARCH GUIDES

### INTEGRATEDMATH

#### I. SCOPENOTE

*Integrated mathematics is the term used to describe the style of mathematics education which integrates multiple strands of mathematic. [mathnasium.com](http://mathnasium.com)*

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

##### BT:

- Applied Science
- Mathematics

##### RT:

- Algebra
- Geometry
- Trigonometry
- Analysis
- Relations and Functions

##### NT:

- Polynomials
- Multiplication of Polynomials
- Rational Expression
- Quadrilaterals
- Linear Equation
- System Function
- Slope
- Tables
- Graphs
- Rectangular Coordinates System
- Representation of Relations and Functions
- Linear Functions
- Parallel and Perpendicular Lines
- Transversal Parallelogram
- Properties of Parallel Lines
- Factoring
- Special Products
- Laws of Exponents

#### III. INFORMATIONRESOURCES

##### A. LIBRARYRESOURCES

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

## ➤ E-JOURNALS

- Journal of Mathematics and the Arts.  
[https://www.proquest.com/publication/publications\\_196166](https://www.proquest.com/publication/publications_196166)
- The Mathematical Gazette.  
[https://www.proquest.com/publication/publications\\_2035960](https://www.proquest.com/publication/publications_2035960)
- International Journal of Mathematics, Game Theory, and Algebra.  
[https://www.proquest.com/publication/publications\\_2034863](https://www.proquest.com/publication/publications_2034863)
- Mathematics Teaching in the Middle School.  
[https://www.proquest.com/publication/publications\\_32879](https://www.proquest.com/publication/publications_32879)
- Gazette - Ontario Association for Mathematics.  
[https://www.proquest.com/publication/publications\\_43656](https://www.proquest.com/publication/publications_43656)
- American Journal of Mathematics.  
[https://www.proquest.com/publication/publications\\_41735](https://www.proquest.com/publication/publications_41735)
- American Mathematical Society Bulletin.  
[https://search.proquest.com/central/publication/publications\\_38168](https://search.proquest.com/central/publication/publications_38168)
- The American Mathematical Monthly.  
[https://search.proquest.com/central/publication/publications\\_47349](https://search.proquest.com/central/publication/publications_47349)
- Mediterranean Journal of Mathematics.  
[https://search.proquest.com/central/publication/publications\\_2044134](https://search.proquest.com/central/publication/publications_2044134)
- The Mathematics Teacher.  
[https://search.proquest.com/central/publication/publications\\_41299](https://search.proquest.com/central/publication/publications_41299)
- The College Mathematics Journal.  
[https://search.proquest.com/central/publication/publications\\_47353](https://search.proquest.com/central/publication/publications_47353)

## ➤ E-THESES

- Mart, M. (2019). The impact of teacher self-efficacy on methodology and the use of graphing technology in teaching factoring quadratic functions: Perspectives of international introductory algebra teachers (Order No. 13859091). Available from ProQuest Central. (2212210947). Retrieved from <https://www.proquest.com/dissertations-theses/impact-teacher-self-efficacy-on-methodology-use/docview/2212210947/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>
- Darch, M. (2018). Characterizing classes of quadrilaterals and hexagons (Order No. 10793876). Available from ProQuest Central. (2100708390). Retrieved from <https://www.proquest.com/dissertations-theses/characterizing-classes-quadrilaterals-hexagons/docview/2100708390/se-2?accountid=190548>
- Garay, G. M. (2016). Seeing beyond the explicit: Orienting learners to perceive underlying mathematical structure (Order No. 10248992). Available from ProQuest Central. (1868419021). Retrieved from <https://www.proquest.com/dissertations-theses/seeing-beyond-explicit-orienting-learners/docview/1868419021/se-2?accountid=190548>
- Vanderbeck, J. J. (2016). Student computer-use and achievement in 8<sup>th</sup> grade mathematics (Order No. 10144254). Available from ProQuest Central.

- (1825684288). Retrieved from <https://www.proquest.com/dissertations-theses/student-computer-use-achievement-8-sup-th-grade/docview/1825684288/se-2?accountid=190548>
- Jimenez, A. (2011). Hands-on equations program: An approach to teaching linear equations using manipulatives (Order No. 3500447). Available from ProQuest Central. (927749497). Retrieved from <https://www.proquest.com/dissertations-theses/hands-on-equations-program-approach-teaching/docview/927749497/se-2?accountid=190548>
  - Rakes, C. R. (2010). Misconceptions in rational numbers, probability, algebra, and geometry (Order No. 3415205). Available from ProQuest Central. (734607416). Retrieved from <https://www.proquest.com/dissertations-theses/misconceptions-rational-numbers-probability/docview/734607416/se-2?accountid=190548>
  - Ramirez, A. A. (2009). A cognitive approach to solving systems of linear equations (Order No. 3415973). Available from ProQuest Central. (741008783). Retrieved from <https://www.proquest.com/dissertations-theses/cognitive-approach-solving-systems-linear/docview/741008783/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>
  - Lewis, B. (2009). Inquiry-based instruction in geometry: The impact on end of course geometry test scores (Order No. 3396319). Available from ProQuest Central. (305079283). Retrieved from <https://search.proquest.com/docview/305079283?accountid=190548>
  - DeMarinis, M. D. (2011). An interactive geometry program and its effect on elementary students' achievement and understanding of geometry: A comparative study (Order No. 3484225). Available from ProQuest Central. (903255014). Retrieved from <https://search.proquest.com/docview/903255014?accountid=190548>
  - Gray, T., & Ross, C. (2020). The effects of an experiential learning course on secondary student achievement and motivation in geometry (Order No. 27838263). Available from ProQuest Central. (2424460813). Retrieved from <https://search.proquest.com/docview/2424460813?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>

## B. OPENACCESS

### ➤ FREE-BOOKS

- Libby, Jim (2017). Math for Real Life Teaching Practical Uses for Algebra, Geometry and Trigonometry. Jefferson, NC: McFarland and Company. <https://www.pdfdrive.com/math-for-real-life-teaching-practical-uses-for-algebra-geometry-and-trigonometry-e176119070.html>
- Muschla, Judith A., Muschla, Gary Robert, Muschla, Erin (2012). Teaching the Common CoreMath Standards with Hands-OnActivities, Grades-6-8. U.S.: Jossey-Bass. <https://www.pdfdrive.com/teaching-the-common-core-math-standards-with-hands-on-activities-grades-6-8-e167670910.html>
- Gelfand, I.M., Saul, Mark (2001). Trigonometry. Boston; Basel: Birkhäuser. <https://www.pdfdrive.com/trigonometry-e33404812.html>
- Abbott, P. (1988). Teach Yourself Algebra. s.l.: Hodder and Stoughton, Ltd. <https://www.pdfdrive.com/teach-yourself-algebra-e157333681.html>
- Stickels, Terry (n.d.). Math Puzzles and Games, Grades-6-8: Over 300-Reproducible Puzzles That Teach Math and Problem-Solving Skills. San Francisco, CA: Jossey-Bass. <https://www.pdfdrive.com/math-puzzles-and-games-grades-6-8-over-300-reproducible-puzzles-that-teach-math-and-problem-solving-e184116318.html>

#### ➤ FREE-JOURNALS

- Journal of Geometry. <https://www.springer.com/journal/22>
- Open Mathematics. <https://www.degruyter.com/view/journals/math/math-overview.xml>
- AIMS Mathematics. <https://www.aimspress.com/journal/Math>
- International Journal of Mathematics. <https://www.worldscientific.com/worldscinet/ijm>

#### ➤ FREE-THESES

- Calderaro, AB (2013). Analysis of the possibility of including alternative approaches for the cosine function in secondary education. (Masters Thesis). Professional Master's Degree in Mathematics. Retrieved from <https://ri.ufs.br/handle/riufs/6504>
- Brabham, K. (2014). Does Exploring Non-Linear Models Address High School Students' Misconceptions of Linearity and Rate of Change?. (Masters Thesis). Louisiana State University. Retrieved from etd-07092014-162114 ; [https://digitalcommons.lsu.edu/gradschool\\_theses/3260](https://digitalcommons.lsu.edu/gradschool_theses/3260)
- Tian, C. (2010). An exploration of connections between high school algebra and abstract algebra. (Thesis). University of Georgia. Retrieved from [http://getd.libs.uga.edu/pdfs/tian\\_chen\\_201005\\_ma.pdf](http://getd.libs.uga.edu/pdfs/tian_chen_201005_ma.pdf)
- Fazekas, M. A. (2011). Teaching high school geometry with tasks and activities. (Masters Thesis). Louisiana State University. Retrieved from etd-07062011-133536 [https://digitalcommons.lsu.edu/gradschool\\_theses/539](https://digitalcommons.lsu.edu/gradschool_theses/539)
- Mendes, AC (2013). Some algebraic and graphical experiments with trigonometric polynomials. (Masters Thesis). Federal University of Viçosa. Retrieved from <http://locus.ufv.br/handle/123456789/5887>
- Hewson, A. E. (2013). An examination of high school students' misconceptions about methods of exponential equations. (Masters Thesis). SUNY College at Fredonia. Retrieved from <http://hdl.handle.net/1951/62653>
- Lane Solheim, Z. S. (2012). The hyperboloid model of hyperbolic geometry. (Thesis). Eastern Washington University. Retrieved from <https://dc.ewu.edu/theses/16>

- Ratliff, M. (2011). Preservice Secondary School Mathematics Teachers' Current Notions of Proof in Euclidean Geometry. (Doctoral Dissertation). University of Tennessee–Knoxville. Retrieved from [https://trace.tennessee.edu/utk\\_graddiss/1118](https://trace.tennessee.edu/utk_graddiss/1118)
- Walsberg, E. (2015). Metric Geometry in a Tame Setting. (Thesis). UCLA. Retrieved from <http://www.escholarship.org/uc/item/9z92f967>
- Watts, Beverly Kinsey. (2011). Relationships of mathematics anxiety, mathematics self-efficacy and mathematics performance of Adult Basic Education students. (Dissertation). Capella University. <https://www.proquest.com/dissertations-theses/relationships-mathematics-anxiety-self-efficacy/docview/862498506/se-2?accountid=190548>
- Vaughn, Christy H. (2012). Middle School Mathematics Students' Perspectives on the Study of Mathematics. (Dissertation). Walden University, 2012. <https://www.proquest.com/dissertations-theses/middle-school-mathematics-students-perspectives/docview/921919883/se-2?accountid=190548>

### C. PROFESSIONAL ORGANIZATIONS

- Philippine Council of Mathematics Teacher Educators (MATHTED), Inc. <http://mathted.weebly.com/>
- Mathematics Teachers Association of the Philippines. <https://mtap.org.ph/>
- Mathematical Society of the Philippines. <https://www.mathsociety.ph/>
- International Mathematical Union. <https://www.mathunion.org/>
- 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-and-communities/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

- Math is Fun. <https://www.mathsisfun.com/geometry/>
- Math Planet. <https://www.mathplanet.com/education/geometry>
- GeoGebra. <https://www.geogebra.org/geometry?lang=en>
- Geometry Coach. <https://geometrycoach.com/>
- Virtual Nerd. <http://www.virtualnerd.com/middle-math/geometry-measurement/rectangle-perimeter-area/rectangle-perimeter-example>

### E. RELATED RESEARCH GUIDES

- Washington University of St. Louis. <https://libguides.wustl.edu/math>
- Columbia University Libraries. <https://guides.library.columbia.edu/math>
- University of Michigan. <https://guides.lib.umich.edu/c.php?g=282871>
- Princeton University Library. <https://libguides.princeton.edu/mathematics>

## IV. TUTORIALS

- Factoring Polynomials. <https://www.youtube.com/watch?v=UV6IfPAQM30>
- Grade 8: Slope of the Line. <https://www.youtube.com/watch?v=uRY5gYVmHDY>
- Grade 8 Math: Linear Equation. <https://www.youtube.com/watch?v=uRe7Y96h3dM>

- Grade 8: Graphing Linear Equations. <https://www.youtube.com/watch?v=SDpl32uwBf4>
- Grade 8: Rectangular Coordinate System. <https://www.youtube.com/watch?v=NrH1Rsym2zs>
- Grade 8: Special Products. <https://www.youtube.com/watch?v=Mdwdfo06MOW>
- Grade8: Factoring by Greatest Common Factor.  
<https://www.youtube.com/watch?v=drZIUbbOrQY>
- Analyze Math. <https://www.analyzemath.com/geometry.html>
- Sophia. <https://www.sophia.org/subjects/geometry>
- Project Math. <https://www.projectmaths.ie/for-teachers/professional-development/tutorials-for-geometry/>
- Khan Academy. <https://www.khanacademy.org/math/geometry>
- Easy Calculations. <https://www.easycalculation.com/trigonometry/trig.php>

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