

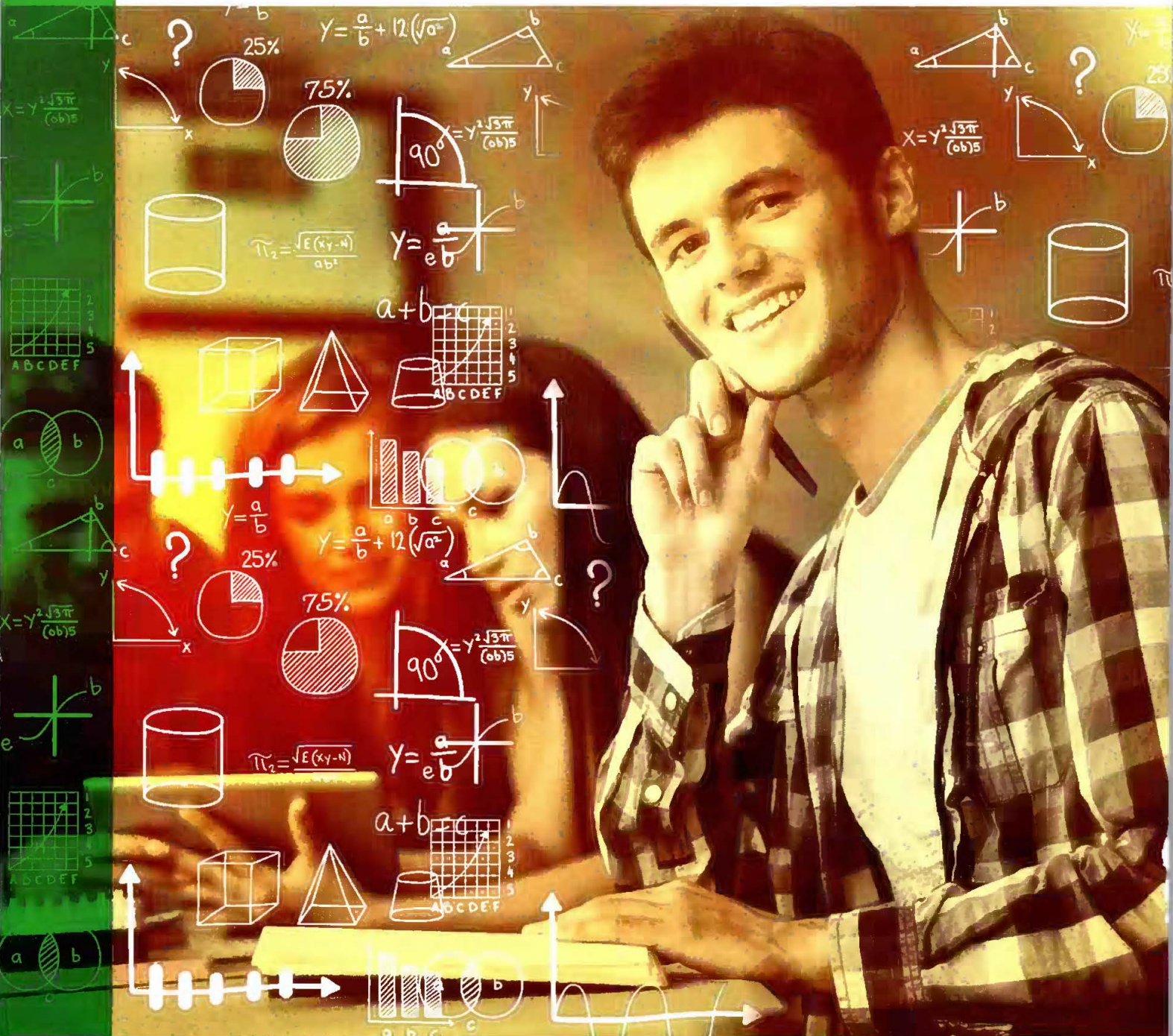


delta-k

Journal of the Mathematics Council of the Alberta Teachers' Association

Volume 53, Number 1

January 2016



Mathematical ideas = Springboard to learning

Guidelines for Manuscripts

delta-K is a professional journal for mathematics teachers in Alberta. It is published twice a year to

- promote the professional development of mathematics educators, and
- stimulate thinking, explore new ideas and offer various viewpoints.

Submissions are requested that have a classroom as well as a scholarly focus. They may include

- personal explorations of significant classroom experiences;
- descriptions of innovative classroom and school practices;
- reviews or evaluations of instructional and curricular methods, programs or materials;
- discussions of trends, issues or policies;
- a specific focus on technology in the classroom; or
- a focus on the curriculum, professional and assessment standards of the NCTM.

Suggestions for Writers

1. *delta-K* is a refereed journal. Manuscripts submitted to *delta-K* should be original material. Articles currently under consideration by other journals will not be reviewed.
2. If a manuscript is accepted for publication, its author(s) will agree to transfer copyright to the Mathematics Council of the Alberta Teachers' Association for the republication, representation and distribution of the original and derivative material.
3. Peer-reviewed articles are normally 8–10 pages in length.
4. All manuscripts should be typewritten, double-spaced and properly referenced. All pages should be numbered.
5. The author's name and full address should be provided on a separate page. If an article has more than one author, the contact author must be clearly identified. Authors should avoid all other references that may reveal their identities to the reviewers.
6. All manuscripts should be submitted electronically, using Microsoft Word format.
7. Pictures or illustrations should be clearly labelled and placed where you want them to appear in the article. A caption and photo credit should accompany each photograph.
8. References and citations should be formatted consistently using *The Chicago Manual of Style's* author-date system or the American Psychological Association (APA) style manual.
9. If any student sample work is included, please provide a release letter from the student's parent/guardian allowing publication in the journal. The editor will provide this letter on request.
10. Letters to the editor, description of teaching practices or reviews of curriculum materials are welcome.
11. Send manuscripts and inquiries to the editor: Lorelei Boschman, c/o Medicine Hat College, Division of Arts and Education, 299 College Drive SE, Medicine Hat, AB T1A 3Y6; e-mail lboschman@mhc.ab.ca.

MCATA Mission Statement

Providing leadership to encourage the continuing enhancement of teaching, learning and understanding mathematics.

CONTENTS

From the Editor's Desk	3	<i>Lorelei Boschman</i>
CONVERSATION STARTERS: ISSUES IN THE FIELD		
Should (or Does) Mathematics Education Research Inform Our Mathematics Teaching Practices?	4	<i>Chantal Buteau, Nadia Hardy and Joyce Mgombelo</i>
Why Use History in a Mathematics Classroom?	7	<i>Glen Van Brummelen</i>
Improving Student Achievement in Mathematics Through Formative Assessment in Instruction	10	<i>AMTE and NCSM</i>
PROBLEM-SOLVING MOMENT		
Quick! Draw!	15	<i>Adele Hanlon</i>
Number Sleuth	17	<i>Cathery Yeh</i>
RESEARCH ARTICLE		
Addressing the Misconceptions of the Equal Sign	18	<i>Brad Weible</i>
TEACHING IDEAS		
If You Are Not Blueprinting Your Assessments, Read This Article	24	<i>Greg Wondga</i>
Integration of Mathematics into Alberta's Homesteading History	29	<i>Dalyce Harrison</i>
Project-Based Learning: The BUX Market Project Grade 9	33	<i>Katherine Weber</i>

Contents continued on page 2

Copyright © 2016 by The Alberta Teachers' Association (ATA), 11010 142 Street NW, Edmonton, AB T5N 2R1. Permission to use or to reproduce any part of this publication for classroom purposes, except for articles published with permission of the author and noted as "not for reproduction," is hereby granted. *delta-K* is published by the ATA for the Mathematics Council (MCATA). EDITOR: Lorelei Boschman, c/o Medicine Hat College, Division of Arts and Education, 299 College Drive SE, Medicine Hat, AB T1A 3Y6; e-mail lboschman@mhc.ab.ca. EDITORIAL AND PRODUCTION SERVICES: Document Production staff, ATA. Opinions expressed herein are not necessarily those of MCATA or of the ATA. Address correspondence regarding this publication to the editor. *delta-K* is indexed in CBCA Education. ISSN 0319-8367

Individual copies of this journal can be ordered at the following prices: 1 to 4 copies, \$7.50 each; 5 to 10 copies, \$5.00 each; more than 10 copies, \$3.50 each. Please add 5 per cent shipping and handling and 5 per cent GST. Please contact Distribution at Barnett House to place your order. In Edmonton, dial 780-447-9432; toll free in Alberta, dial 1-800-232-7208, ext 432.

Personal information regarding any person named in this document is for the sole purpose of professional consultation between members of The Alberta Teachers' Association.

MATH CONTEST EXAMS

Alberta High School Mathematics Competition 2014/15	36
Edmonton Junior High Mathematics Competition 2014/15	47
Calgary Junior High Mathematics Competition 2014/15	52

BOOK REVIEWS

The Odds Are You Will Relate to the Book, <i>Struck by Lightning</i> , by Jeffrey S Rosenthal Reviewed by Cheyenne Murphy	65
Everyday Mathematics—Book Review of <i>Life by the Numbers</i> , by Keith Devlin Reviewed by Katelyn Valkenburg	66

WEBSITE HIGHLIGHT

YouCubed: Broadening the Conversation for Supporting Student Success in Mathematics	68	<i>Holly Henderson Pinter</i>
---	----	-------------------------------