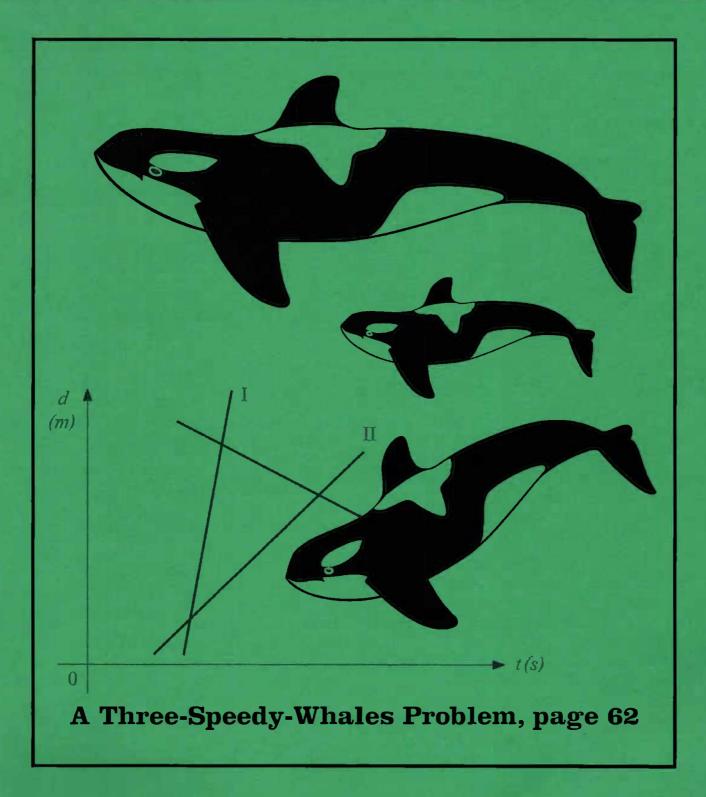


456789 123456789

Volume 48, Number 1

December 2010

456789 123456789



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. All manuscripts should be typewritten, double-spaced and properly referenced. All pages should be numbered.
- 4. 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.
- 5. All manuscripts should be submitted electronically, using Microsoft Word format.
- 6. 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.
- 7. References should be formatted consistently using *The Chicago Manual of Style*'s author-date system or *The American Psychological Association (APA)* style manual.
- 8. If any student sample work is included, please provide a release letter from the student's parent/guardian allowing publication in the journal.
- 9. Articles are normally 8–10 pages in length.
- 10. Letters to the editor or reviews of curriculum materials are welcome.
- 11. Send manuscripts and inquiries to the editor: Gladys Sterenberg, 195 Sheep River Cove, Okotoks, AB T1S 2L4; e-mail gladyss@ualberta.ca.

MCATA Mission Statement

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



Volume 48, Number 1

FROM YOUR COUNCIL

December 2010

CONTENTS

From the Editor's Desk	2	Gladys Sterenberg
STUDENT CORNER		
Piano Keys	3	Kevin Wang
FEATURE ARTICLES		
The New Curriculum: Will It Make Mathematics Meaningful for Students?	4	Werner Liedike
Research in and Development of School Mathematics: Delving Deeper into Concepts to Revitalize the Mathematics Taught and Learned in Schools	11	Jérôme Proulx
TEACHING IDEAS		
The Unusual Die: Exploring a Problem Through Technology	21	A Craig Loewen
Home Ice Advantage: Representing Numbers to 20, Grade 1	25	Lesley Ross and Brenda Wells
Alberta High School Mathematics Competition	34	
Edmonton Junior High Mathematics Contest	41	
Calgary Junior High Mathematics Contest	54	
PROBLEM PAGE		
A Three-Speedy-Whales Problem	62	Gregory V Akulov

Copyright © 2010 by The Alberta Teachers' Association (ATA), 11010-142 Street NW, Edmonton, AB T5N 2R1. Perinission 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: Gladys Sterenberg. 195 Sheep River Cove. Okotoks, AB T1S 2L4; e-mail gladyss@ualberta.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 the Canadian Education Index. 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 780-447-9400, ext 321; toll free in Alberta, dial 1-800-232-7208, ext 321.

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