# Mathematics Council NEWSLETTER

## The Alberta Teachers' Association

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

## From the Editor

Just a quick welcome to another year of teaching students mathematics. You likely have some exciting plans for the year and we would like to hear about them! ▲

—*Art Jorgensen*

## Inside

## From the President's Pen

Welcome back to another school year. Hopefully it will be a productive and rewarding one.

The MCATA executive met September 20–21 to plan and discuss activities and issues for the upcoming year. We anticipate that these plans will provide a number of benefits to all members.

We are looking forward to the Annual MCATA Conference in Red Deer, November 1–3, 1996. Graham Keogh and his committees worked very hard to provide a positive, enjoyable professional development opportunity for conference participants. The annual general meeting on Saturday, November 2, will allow members to consider the proposed constitutional change and executive structure. Hopefully there will be a positive turnout.

We desperately need input from all members. If you think of any issues, suggestions, questions or comments, please feel free to contact any member of the executive. ▲

—*George Ditto*

# Conferences

☞ 1996 MCATA Conference, Capri Centre, Red Deer, November 1–3, 1996. An exciting program is planned. The keynote speakers are Pat Rogers from York University and Katherine Henrich from Simon Fraser University. Hope to see you there.

☞ Math Symposium. Red Deer College, Red Deer, November 1, 1996. Alberta Education and MCATA are planning a program for mathematics leaders .

☞ NCTM 75th Conference, Minneapolis, April 17–20, 1997.

☞ 1997 MCATA Math Conference. Edmonton will be hosting the 1997 Mathematics Conference at the Edmonton Inn from October 31–November 2, 1997. The focus of the conference will be communication in mathematics. Interested in helping with the planning, or in presenting a session or workshop? Contact Marge Manka at 433-0692 (res.) or 462-3322 (bus.).

☞ NCTM Regional Conference, October 23–25, 1998, Calgary. For more information contact conference cochairs George Ditto 610 18 Avenue N.W., Calgary T2M 0T8; phone 777-7860 (bus.), 289-1709 (res.), fax 686-1055, e-mail gditto@cbe.ab.ca; or, Bob Michie 149 Wimbledon Crescent S.W., Calgary T3C 3J2, phone 289-9241 (bus.), 246-8597 (res.), fax 777-7309, e-mail bmich@cbe.ab.ca. ▲

# Exciting New Tools for Mathematics Education

Raymond Forgets and Denyse Gagnon-Messier have developed some innovative teaching tools for teaching geometry and trigonometry: the Radius Protractor, trade-marked as RADE, a special COMPASS and the TRIG-O-METRE. These tools are available from the LRDC, and will be displayed at the Red Deer Conference. ▲

# Elections for NCTM Board of Directors

I have been nominated as a candidate for the NCTM Board of Directors in the fall elections. Having been involved with NCTM for a number of years, I feel that as a classroom teacher I can add to the success that NCTM has had in the past.

Through working with the Regional Services Committee of NCTM, I have tried to open the communication lines between the affiliated groups and NCTM. This dialogue has allowed for "grassroots" input from members and strengthened ties between NCTM and its membership. This input is valued by NCTM. As a director I would work hard to continue this partnership.

Please return your ballot. ▲

—*Richard Kopan*

# Mathematics Month

The NCTM proclaims April Mathematics Month. How about starting now to plan innovative mathematics activities for April 1997? Kits are available from NCTM, 1906 Association Drive, Reston VA 22091-1593. ▲

# MCATA Executive Meeting

The MCATA executive met in Edmonton in September. Much of the meeting was devoted to discussing increasing membership, conference organization, publications and the budget.

There is real concern as to how to best meet the needs and interests of the membership. That is why we would like to hear from you. ▲

# Math Contests

☞ 12th Annual American Junior High School Mathematics Examination, Thursday, November 21, 1996, for students in Grade 8 or below. See enclosed registration form.

☞ American High School Mathematics Examination (AHSME) February 14, 1997. See enclosed brochure. ▲

# Math Challenges

1. What is the smallest whole number that has a remainder of 4 when divided by 5, and a remainder of 6 when divided by 7?

2. What common fraction is one-third of the way from ¼ to⅓?

## Answers

1. 34

2. 5/18

Let the students tackle these problems before providing the answers.

*These problems were reprinted with permission from* Teaching Mathematics in the Middle School, *Volume 1, Number 10, May 1996, page 811.* ▲

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## Talking of Humor

**John F. Kennedy once said, "Three things in life are real: God, man's follies and laughter. Since the first two are incomprehensible, we must do the best we can to do the third."**

## Teachers' Task!

**To take a lot of live wires and to make sure they are well grounded.**

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# Calendar Math

*by Arthur Jorgensen*

Here are 31 math exercises, one for each day of the month for January 1997.

1. Draw a rectangle with an area of 12cm$^2$.

2. If the 12th of the month falls on a Tuesday, what day does the 23rd fall on?

3. Estimate your height, then have a friend measure you to the nearest centimetre.

4. If hamburgers cost 99¢ and chips cost 55¢, how much change would you get from a $2 coin, if you bought one of each?

5. If vowels are worth 5 points and consonants are worth 10 points, what is the value of your first name?

6. In a class of 20 students, 3 have three pets, 4 have two pets, 8 have one pet and the remainder have no pets. In all how many pets are there?

7. If a quarter of a pizza costs $1.25, what will a whole pizza cost?

8. If I can walk 6 km in an hour, how long will it take me to walk 2 km?

9. If the temperature at 7 a.m. is 10°C, and it falls 11°C by noon, what is the noon temperature?

10. Arrange 7 toothpicks so as to make two squares.

11. If your dad's car goes 10 km on a litre of gasoline, how many litres of gasoline will be used to go from Edson to Edmonton, a distance of 200 km?

12. If the top of a standard die shows a 5, what numeral is directly below it?

13. The numerals 49, 661, 832, 706 and 544 are all bozos, while the numerals 39, 117, 588 and 444 are not bozos. What makes a numeral a bozo? Write 3 more bozos.

14. Combine the following numerals 3, 8, 5, 6 to get an answer of 10. You can use each numeral only once, and you may use all the basic operations.

15. Look for a pattern and write the next three numbers: 3, 4, 6, 9, 13, __, __, __.

16. Put the numbers 1–7 in squares so as to have the same sum in each row and column.

17. Write a problem using addition and subtraction and the values 27, 103 and 76.

18. Tom has $1.33. Does he have enough money to buy a chocolate bar for 79¢ and a Coke for 81¢?

19. In a box of Smarties 17 are red, 23 are yellow and the rest are brown. Altogether there are 53 Smarties. How many brown Smarties are there?

20. Jane is 3 years older than Mary and 4 years younger than Jasper. If Jane is 9 years old, how old are Mary and Jasper?

21. Peter can buy 3 CDs for $15.45 or 5 CDs for $26.65. Which is the better buy?

22. In a box of apples one of every 4 is spoiled. If there are 12 spoiled apples in a box, how many good apples are there?

23. Zodwc has 15 coins. They are either nickels or dimes. If the total value is $1.20, how many dimes and how many nickels does she have?

24. If you toss 3 standard dice, what are the largest and the smallest sums that you can get?

25. How many Mondays are there in January if the first Monday falls on January 3? What is the date of the last Monday?

26. Draw a bar graph showing the number of children in each of the families represented in your classroom.

27. If you have to be at school at 8:45 a.m., at what time will you have to leave home if it takes you 20 minutes to walk to school?

28. If Peter threw five darts at the dart board and scored a total of 27, on what numbers did his darts land?

29. The sum of 2 numbers is 8, and their product is 15? What are the numbers?

30. Susan wants a new bike which costs $149. She babysits for $5 an hour. How many hours will she have to babysit in order to buy the bike?

31. In a particular floor plan there are 3 red tiles for every white tile. If there are 40 white tiles, how many tiles are there on the floor?

I realize that the difficulty levels of these exercises vary significantly. However, with minor adjustments of the numbers each of them can be adapted to students at almost any level. ▲

# MCATA Rewards New and Renewing Members

To reward new and renewing members for their support of MCATA, the membership director is implementing the following reward program. There will be draws for three sets of prizes awarded quarterly to new and renewing members. First prize will be one MCATA conference registration, second prize will be a one-year MCATA membership and third prize will be a $25 voucher for NCTM materials.

Thank you for your continued support of MCATA. Please encourage your colleagues to join our great specialist council.

*—Daryl Chichak*
*Membership Director*

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**New Release**

# GrAde Expectations

## A Multicultural Handbook for Teachers

Educators have long been aware that student learning is maximized when learners feel good about themselves and recognize that their origins and cultural backgrounds are personal assets. As a result they can attack meaningful tasks with the expectation of success. These objectives stand a better chance of realization when the learning environment is in the hands of skilled teachers who are "in the know", multiculturally-speaking.

This handbook is a "must" for anyone wishing to be informed about the multi-facetness of practical multiculturalism. Order your copy today!

**Sample chapter** titles (there are 14 in all) include:

1. *Celebrating Cultural and Intercultural Diversity in the Classroom* by Hilda Mah
2. *Multiculturalism and Early Childhood Education* by Virginia Lyons Friesen
3. *Culture and the Learning Process* by Laura Ho and Bruce Bain
4. *Language and Culture* by Mary Ashworth
5. *Comprehension and Culture for Native ESL Students* by Mary Anna Harbeck
6. *Linking Global Education and Multiculturalism* by Mathew Zachariah
7. *Administering the Multicultural School* by Robert O'Reilly

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## Order Form

Please send me _____ copies of GrAde Expectations at $15.00 each (including GST and postage).

_____     _____
              Name                                    Address

_____  _____        _____
      City                   Prov                  Postal Code

**Order from** Multicultural Education Council, ATA, Barnett House, 11010-142 St. Edmonton, AB, T5N 2R1