From the Editor...

The following article, taken from the December 1983 issue of the <u>Arithmetic Teacher</u>, intrigued me. Likely, all of us who teach children mathematics have at one time or another been guilty of this offense. Hopefully, as a result of reading this article, we may be somewhat more conscious of our methods of dealing with the slower student in the future.

Low Achievers

by Marilyn N. Suydam
Ohio State University, Columbus, Ohio

Even though teachers may not realize it, they frequently treat high-achieving students quite differently from the way they treat those who achieve poorly. In several studies, the way teachers talked to bright students was friendlier, more encouraging, and more accepting than the way they talked to other students.

A recent report has indicated that a variety of other things also happen to low achievers. They are:

- seated farther from the teacher or in an identifiable cluster;
- given less attention in academic situations;
- called on less often, thus receiving fewer chances to participate;
- given less time to respond before the teacher goes on to someone else;
- given fewer clues and asked fewer follow-up questions when they answer incorrectly;
- praised less frequently after correct answers and praised more for marginal or inadequate answers;

- given less accurate, less detailed, and less frequent feedback;
- required to do less work and allowed to put forth less effort;
- interrupted more frequently.

The implications are clear; students are being given a self-image that will probably result in even poorer achievement (and perhaps other problems as well). It should be apparent, however, that teachers can do something to change the image that is being communicated to low achievers.

For additional information, see the following articles:

"Differences in Instructional Activities in Higher and Lower-achieving Junior High English and Math Classes," Carolyn M. Evertson, Elementary School Journal 82 (March 1982): 329 - 50.

"Teacher Expectations and Student Perceptions: A Decade of Research," Thomas L. Good, Educational Leadership 38 (February 1981): 415 - 22.

Modern Math "Daffynitions"

Base	-	Something to run to
Plus	-	Something you get in an infection
Graph	-	Bobby Baker, and something Goldwater was against
Minus	-	Something that's not yours

Upcoming Events

The 1984 MCATA conference will be held in Red Deer this coming October. If you have ideas for sessions or speakers, please contact any member of the executive now.

The biggest news is that MCATA hopes to sponsor a NCTM "Name the Site Conference" in Edmonton in 1985. This is a major conference, running Thursday through Saturday.

Chairman for this conference is Dr. Joan Worth, c/o Department of Elementary Education, University of Alberta. With Joan at the helm, this is bound to be an excellent conference.

I am sure that Joan would be receptive to any ideas for sessions or speakers.

The Prez Says...

There have been requests for a list of speakers by NCTM. The combined list will be sent to the presidents and NCTM representatives across Canada.

If you would like to be considered for this list, send your name, address, target group (primary, middle, junior high, senior high, post-secondary), topic and publisher affiliation (if any) to:

Ron Cammaert
Provincial Building
200 - 5 Avenue South
LETHBRIDGE T1J 4C7

PUZZLES

1. What is the smallest number which leaves a remainder of 1 when divided by 2, a remainder of 2 when divided by 3, a remainder of 4 when divided by 5, and a remainder of 6 when divided by 7. Verify that the number is the product of two prime numbers.

2. Show that no square numbers are of the form:
   $7M + 3$, $7M + 5$, or $7M + 6$.

Answers are on page 6.

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What's New?

The _Arithmetic Teacher_, published by the NCTM, is a very useful source of information related to all aspects of mathematics teaching. This publication should be in all school libraries.

Described in the October 1983 issue are some excellent resource books, a summary of which is included below:

PROBLEM CORNER

1.* Tommy, Billy, and Nancy collect and trade baseball cards. One
    day Tommy gave Billy two Darrell Porters and a piece of bubble-
    gum for a Reggie Jackson. Later, he gave Billy three pieces of
    bubblegum to get his Darrell Porters back, one of which he
    traded to Nancy for a Cesar Geronimo and a piece of bubblegum.
    Using this consistency, how many Cesar Geronimo's must one
    give to Tommy to get his Reggie Jackson?

2.* At a recent math contest, two tests were offered: Test A and
    Test B. Out of 87 students who signed up for the contest,
    there were 133 entries. Some students took both tests, and
    7 more students took Test A than Test. B. How many students
    took Test A?

3.* Restore each letter with a different digit   NEWS
    so the following is a base ten addition   IS
    problem.   MATH

Multiplication Puzzle

Draw a loop around the numbers whose product is 720.

(360	X	2)	X	9	X	8	X	10
X	30	X	12	X	2	X	5	X
3	X	2	X	4	X	90	X	4
X	36	X	20	X	5	X	8	X
30	X	180	X	4	X	5	X	2
X	40	X	2	X	72	X	18	X
8	X	3	X	45	X	16	X	18
X	18	X	10	X	4	X	18	X
6	X	240	X	4	X	9	X	20

Score yourself: 18 or more: Super
                 13 to 17:   Good
                  8 to 12:   Fair
                  3 to 7:   Try it again!

* Answers on page 6.

Answers to PUZZLES
(from page 3):

1. If N is the number, then N+1 leaves no remainder when divided by 2, 3, 5, or 7. So N + 1 = 2 X 3 X 5 X 7 = 210, and the number is 209 = 11 x 19.

2. Square numbers, when divided by 7, leave remainders of 0, 1, 2, or 4, since all numbers are of the form 7M, 7M + 1. 7M + 2 or 7M + 3, and their squares are of the form 7M, 7M + 1, 7M +4, 7M +2, and none are of the form 7M + 3, 7M + 5 or 7M + 6.

Answers to PROBLEM CORNER
(from page 5):

1. 8 "Geronimo's"

2. 70 students

3. There are four solutions to this problem:

1983	1973	1974	1964
73	83	64	74
2056	2056	2038	2038