

THE DUODECIMAL BULLETIN

4#;



DOZENAL SOCIETY OF AMERICA
 c/o Math Department
 Nassau Community College
 Garden City, LI, NY 11530



Volume 29;
 Number 3;
 Fall 1984
 1194;

THE DOZENAL SOCIETY OF AMERICA

(Formerly: The Duodecimal Society of America)

is a voluntary, nonprofit, educational corporation, organized for the conduct of research and education of the public in the use of base twelve in numeration, mathematics, weights and measures, and other branches of pure and applied science.

Membership dues are \$9.00 (US) for one calendar year. Student membership is \$3.00 per year, and a Life membership is \$144.00 (US).

The Duodecimal Bulletin is an official publication of the DOZENAL SOCIETY OF AMERICA, Inc. c/o Math Department, Nassau Community College, Garden City, LI, NY 11530.

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The DSA does NOT endorse any particular symbols for the digits ten and eleven. For uniformity in publications we use the asterisk (*) for ten and the octothorpe (#) for eleven. Years ago, as you can see from our seal, we used χ and ϵ . Both χ and * are pronounced "dek". The symbols # and ϵ are pronounced "el".

When it is not clear from the context whether a numeral is a decimal or a dozenal, we use a period as a unit point for base ten and the semi-colon, or Humphrey point, as a unit point for base twelve.

Thus $\frac{1}{2} = 0.5 = 0;6$.

The Duodecimal Bulletin

Whole Number Four Dozen El

Volume 29; Number 3;

Fall 1194;

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Patricia McCormick Zirkel, *Editor*
Editorial Office:
6 Brancatelli Court
West Islip, New York 11795

DOZENAL SOCIETY OF AMERICA

Annual Meeting

*Friday to Sunday
October 12 to 14, 1984*

*Nassau Community College
Garden City, LI, NY 11530*

Schedule

Friday Evening, October 12, 1984

A social gathering, with friends and spouses. (Specifics to be announced -- schedules for local theatrical events are yet to be published.)

Following the theater (or other event) we will gather at the home of Alice and Edmund Berridge for cocktails and snacks.

Saturday, October 13, 1984

I 10 AM (Administrative Tower -- Nassau Community College)

Business of the Society -- Tentative Agenda

1. Minutes of the 1983 Annual Meeting -- Impagliazzo
2. President's Report -- G. Zirkel
3. Treasurer's Report -- Malone
4. Editor's Report -- P. Zirkel
5. Report of the Committee on By-Laws -- Scordato
6. Reports by other Officers
7. Report of the Nominating Committee -- De Santo, Gany, Berkman

SCHEDULE, 1984 ANNUAL MEETING, Continued

Election of the Class of 1987 of the Board of Directors
Election of the Officers by the Board

8. Appointment of new Committees
9. New Business

LUNCHEON 12 - 2 PM

II 2 PM Speakers

1. R. Keith Kirby, Acting Chief, Office of Physical Measurement Services, National Bureau of Standards, Gaithersburg, MD

Mr. Kirby will speak on the functioning of his office as to quality control and the various types of standards applied in industrial settings.

2. Fred Newhall, DSA Member

Fred will discuss language and efficient number symbols.

3. Dudley George, Board Member

Dudley will discuss squares and approximations.

We hope to allow ample time for group discussion of the speakers' topics.

III Evening

Our Annual Banquet, with spouses, guests and friends.

Dinner will be served at the College, on the top floor

Continued . . .

SCHEDULE, 1984 ANNUAL MEETING, Continued

of the Administrative Tower, with its commanding views of Nassau County and the New York skyline.
Cost: \$20.00 per person.

Sunday, October 14, 1984

Sightseeing and departure, at leisure.

Please let us know if you are coming so that arrangements can be made for refreshments, tickets, etc.

For further information, call President Gene Zirkel at:
(516) 222-7611/7383 (College)
(516) 669-0273 (Home)



Hotels Convenient to DSA Annual Meeting

October 12 to 14, 1984

The Long Island MARRIOTT HOTEL	101 James Doolittle Blvd. Uniondale, NY 11553 (516) 794-3800
The COLISEUM MOTOR INN	1650 Hempstead Tpke. East Meadow, NY 11554 (516) 794-2100

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Rich Silvestri

We're sorry...

... but on page 8 of our last issue we made a mistake. It should have read that Jack Skillman proposed the problem of the twelve couples at dinner. It was Thomas Elsner who solved it using twelve digits.

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THANKS

...To Fred Newhall, who performed the painstaking and arduous task of preparing this Index. Those whose research causes them to use it will certainly appreciate his thoroughness. Thanks again, Fred!

DOZENAL JOTTINGS

JOE CELKO, 18#; of Atlanta, GA agreed to represent our Society on September 18th at the inauguration of Jesse Steinfeld, M.D., as the fifth president of the The Medical College of Georgia in Augusta....JAMISON HANDY's dad passed away on November 14, 1983. He was 97 years old....Continuing our comments for a notation to indicate which base is being used, we recently came across a suggestion of former President TOM LINTON's. His idea was to indicate the base by a subscript equal to the largest single digit (which is, of course, the base being used minus one). Thus instead of

$13_{\text{twelve}} = 15_{\text{ten}} = 21_{\text{seven}} = 1111_{\text{two}}$ Tom suggested

$13_{\#} = 15_9 = 21_6 = 1111_1$,....FRED NEWHALL, 279; sent us a

copy of the May 1984 issue of Franklin and Marshall's Alumni Magazine Consortium. It contains a piece by Robert Kanigel of Baltimore, MD entitled "Counting Down the Top Ten", a brief biography of not ten, but eleven numbers: 9, 8, 5, 6, twelve, 4, 7, 0, 2, 3, and 1. The author said some very favorable things about six as half of twelve, and he evidenced some knowledge of counting in base twelve and of its advantages. The article, with pictures, appeared on pages x through xvi....Student member TRUNG A. DIEP, 285; of Pensacola, FL received second place in his school science fair and honorable mention in the regional fair for his duodecimal project. Congratulations, Trung!

end



COUNTING IN DOZENS

1 2 3 4 5 6 7 8 9 * # 10
 one two three four five six seven eight nine dek el do

Our common number system is decimal—based on 10. The dozen system uses twelve as the base, which is written *10*, and is called *do*, for dozen. The quantity *one gross* is written *100*, and is called *gro*. *1000* is called *mo*, representing the meg-gross, or great-gross.

In our customary counting, the places in our numbers represent successive powers of ten; that is, in 365, the 5 applies to units, the 6 applies to tens, and the 3 applies to tens-of-tens, or hundreds. Place value is even more important in dozenal counting. For example, 265 represents 5 units, 6 dozen, and 2 dozen-dozen, or gross. This number would be called *2 gro 6 do 5*, and by a coincidence, represents the same quantity normally expressed as 365.

We use a semicolon as a unit point, thus two and one-half is written 2;6.

Place value is the whole key to dozenal arithmetic. Observe the following additions, remembering that we add up to a dozen before carrying one.

94	136	Five ft. nine in.	5;9'
31	694	Three ft. two in.	3;2'
96	3#2	Two ft. eight in.	2;8'
19#	1000	Eleven ft. seven in.	#;7'

You will not have to learn the dozenal multiplication tables since you already know the 12-times table. Mentally convert the quantities into dozens, and set them down. For example, 7 times 9 is 63, *which is* 5 dozen and 3; so set down 53. Using this "*which is*" step, you will be able to multiply and divide dozenal numbers without referring to the dozenal multiplication table.

Conversion of small quantities is obvious. By simple inspection, if you are 35 years old, dozenally you are only 2#, which $12 \overline{) 365}$ is two dozen and eleven. For larger numbers, $12 \overline{) 30} + 5$ keep dividing by 12, and the successive remainders are the desired dozenal numbers. $12 \overline{) 2} + 6$
 $0 + 2$ Answer: 265

Dozenal numbers may be converted to decimal numbers by setting down the units figure, adding to it 12 times the second figure, plus 12^2 (or 144) times the third figure, plus 12^3 (or 1728) times the fourth figure, and so on as far as needed. Or, to use a method corresponding to the illustration, keep dividing by *, and the successive remainders are the desired decimal number.

Fractions may be similarly converted by using successive multiplications, instead of divisions, by 12 or*.

For more detailed information see *Manual of the Dozen System* (\$1;00).

We extend an invitation to membership in our society.
 Dues are only \$9 (US) per calendar year; the only requirement is a constructive interest.

Application for Admission to the Dozenal Society of America

Name _____
LAST FIRST MIDDLE

Mailing Address (for DSA items) _____

(See below for alternate address)

Telephone: Home _____ Business _____

Date & Place of Birth _____

College _____ Degrees _____

Business or Profession _____

Employer (Optional) _____

Annual Dues \$9.00 (US)

Student (Enter data below) \$3.00 (US)

Life \$144.00 (US)

School _____

Address _____

Year & Math Class _____

Instructor _____ Dept. _____

Other Society Memberships _____

Alternate Address (indicate whether home, office, school, other)

Signed _____ Date _____

My interest in duodecimals arose from _____

Use space below to indicate special duodecimal interests, comments, and other suggestions, or attach a separate sheet:

Mail to: Dozenal Society of America
 c/o Math Department
 Nassau Community College
 Garden City, LI, NY 11530

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