
DSA Newscast

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DACTYLONOMY, PART I

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The Dozenal Society of America is a voluntary, nonprofit educational corporation, organized for the conduct of research and eduction of the public in the use of dozenal (also called duodecimal or base twelve) in calculations, mathematics, weights and measures, and other branches of pure and applied science.

As the Bard proclaimed, “[T]hose that understood him smiled at one another and shook their heads; but, for mine own part, it was Greek to me” (Julius Caesar). Using Greek roots makes anything sound more impressive, more dignified, and most importantly more complicated; but “dactylonomy” is truly a simple thing. That is, it’s as simple as counting on one’s fingers; since that’s precisely what it is.

Dozenalists have long noted that, had man received six fingers on each hand rather than our poor, prime five, we’d doubtlessly live in a dozenal world, and that is true enough. And our children still learn to count on their fingers in the very simplest way possible. Or so it seems; but even counting 1 to X on our fingers is more complex than first appears; there are, after all, so many different ways to go about it.

In Europe, counting begins with the thumb; in America, it begins with the index finger. In Japan, counting starts with all fingers extended and ends with a closed fist; in China, an entire system has developed by

which 1-9 can be expressed with a single hand. In former times, systems of finger-counting could grow quite complex; indeed, the Venerable Bede of medieval England described a system evidently in common use by which numbers of almost arbitrary size could be expressed. In some ages and places, the fingers are even used as abaci, enabling counting and calculation with surprising speed and dexterity.

This series will explore methods of finger-counting in current or former use, proposed methods of finger-counting, and which ones are simplest and best-suited for dozenal use. In these days of calculators and computers we carry in our pockets, dactylonomy is not of the paramount importance it once was. But since “How can you count on your fingers?” invariably comes up whenever discussing non-decimal bases, it’s worth a look, at least in passing.

Next month: varieties of finger-counting in current common use.

SOCIETY BUSINESS

As noted in our last issue, many years, the DSA has been employing the Dwiggins numerals (a stylized X and E) for the numbers ten and eleven in our publications. However, the Pitman nu-

merals (an inverted 2 and 3), long used by our sister society, the Dozenal Society of Great Britain, have been accepted into the now nearly universal Unicode standard.

Due to this, at the Annual Meeting in 1187, the Editor of the Bulletin, Michael deVlieger, proposed that we cease using the Dwiggins numerals and begin using the Pitman numerals

in our publications. However, your board wanted to know the positions of our membership before making such an important decision.

Several of you were good enough to email your thoughts on this matter to us; thank you. For those who per-

haps don't have strong enough opinions to write justifications, but simply wish to note your idea, we have made a poll available on the DSA website:

<http://www.dozenal.org/drupal/content/transdecimal-characters>

This page gives a (very) brief statement of the issue and a link to a poll site for voting. Thanks to our membership for making their wishes known on this important matter.

ASSISTANCE NEEDED FOR IOS APPS

Dr. Paul Rapoport (#230) has graciously volunteered his time and money to develop at least a dozenal clock app for the iOS operating system. If you are interested in contributing to this effort, please let us know.

OLDEST DOZENAL TREATISE YET FOUND

Though Pascal's mere mention of the possibility of dozenal arithmetic has made great rounds in dozenal circles,

and Stevin's completely apocryphal support for our favorite base continues to be cited, for some reason Ioannis Caramuelis, often known by his Spanish name Juan Caramuel y Lobkowitz, has not been mentioned in any list of dozenal authors your editor has yet encountered. This is surprising because he authored the first real exposition of a fully and consistently dozenal arithmetic in history, as far as I have been able to find:

<http://www.dozenal.org/drupal/content/de-arithmetica>

Presented here in the original Latin, translated semi-literally into English (his Latin is hard to carry into English, but I did my best) in parallel columns, one can find what

can rightly be termed the "original" proposal for dozenalism. Focused strongly on astronomy, which in his day was nearly synonymous with mathematics among the educated, Lobkowitz argues mildly yet persuasively for dozenal, providing examples of all four of the usual mathematical functions.

Indeed, given that Leibnitz's seminal binary work wasn't until 33 (39) years later (in E7E (1679)), this is likely the first work in history which shows explains our now-standard Indo-Arabic numeral arithmetic algorithms in a non-decimal base.

A great find, proving once again that dozenal has always been on the forefront of mathematics.

POETICAL DIVERSION

To Twelve or not to Twelve, that is the question—

Whether 'tis Nobler in the mind to suffer
the Slings and Arrows of outrageous Dec'mal,
Or to take Arms against a Sea of Tenners,
And by opposing end it? To d'vide by three—
What grace! And by a grace, to say we end
The Heart-ache of the paltry two and five
The Ten-god gives us? 'Tis a consummation
Devoutly to be wished. To halve, to third,
To third, perchance to Quarter; there's the rub,
For in those factors three, what dreams may
come,

When we have shuffled off this curse of Ten
Must give us joy. And there is Ten's foul lack
That makes Calamity of 'rithmetic;
For who would bear the need to d'vide by five,
The Oppressor's wrong, the jacket strait of Ten,
The pangs of despised Three, the Prime's delay,

The insolence of Dec'mal, and the Spurns
That patient Twelve endures from Dec'malists,
When he himself might his Quietus make
With a bare Dozen? Who would these insults
bear,
To grunt and sweat with fives when threes are
here,
But that the dread of being called a crank,
The sentence of the Dec'mal, from whose bourn
No Traveller returns, saps out the will
And makes us rather bear the weight of Ten
Than seek the flight which Twelve can give us
all.

Thus Decimal makes Cowards of us all,
And thus the Native strength of Doz'nal's height
is made to look like weakness, timid fear;
This enterprise of great and mighty Twelve
Diverted into merely hobby ground.
But Twelve will triumph yet, if we are strong,

And keep in mind the factors; then we shall
Ensure that Twelve shall never bow to Ten.

(See *Hamlet*, Act III, Scene 1.)

DONATIONS

Members, please remember that while dues are no longer required for membership, we still rely on the generosity of members to keep the DSA going. Donations of any amount, large or small, are welcome and needed.

A donation of \$10; (\$12.) will procure Subscription membership, and entitles the payer to receive both a digital and a paper copy of the *Bulletin* if requested. Other members will receive only a digital copy. To invoke this privilege, please notify the Editor of the *Bulletin*, Mike deVlieger, at

mdevlieger@dozenal.org

As members know, we are a volunteer organization which pays no salaries. As such, every penny you donate goes toward furthering the DSA's goals.

It may be worth considering a monthly donation; say, \$3, or \$6, or whatever seems reasonable to you. This can be set up quite easily with PayPal or WePay, both of which are available at our web site.

Of course, if you prefer to donate by check, you may send them

to our worthy Treasurer, Jay Schiffman, payable to the Dozenal Society of America, at:

Jay Schiffman
604-36 South Washington
Square, #815
Philadelphia, PA 19106-4115

Remember, too, that the DSA is a 501(c)(3) tax-exempt organization, so your contributions may be tax deductible under applicable law.

FOR SALE

The DSA is pleased to offer the following for sale. These are all either at cost, or the proceeds go to the Society.

Item	Price (\$)
Wall Calendar for 11EE, coiled binding	10.05
Weekly Planner for 11EE	8.29
TGM: A Coherent Dozenal Metrology	8.00

Prices are, unfortunately but by necessity, in decimal. To find these works, simply go to:

<http://www.lulu.com/shop/shop.ep>

and enter the appropriate terms. E.g., searching for "11EE" will turn up these calendars and the planner; searching for "TGM dozenal" will turn up the TGM book.

We hope to offer other titles, and even some other items (such as dozenal clocks and the like), in the near future.