

DSA Newscast

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The official newsletter of the Dozenal Society of America

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SO WHAT'S THE POINT?, PART II

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So What's the Point?, Part II

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The Dozenal Society of America is a voluntary, nonprofit educational corporation, organized for the conduct of research and education 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.

IN OUR LAST ISSUE, WE discussed the troubling prevalence of the “I’m not a math person” trope, even though no one would ever use such phrases as “I’m not a words person” or “I’m not a food person”. This mathematical illiteracy, or innumeracy, is a real problem, both in the world in general and when we’re trying to explain why we’re so excited about dozenal. This month, we’ll look at why innumeracy is a problem, and why everyone has to be a “math person”, at least to a certain degree.

To recap our last featured article, innumeracy, our word for mathematical illiteracy, is not only accepted but actively celebrated. When I hand someone a book and suggest that they read it, no one tells me, “I’m just not good with words.” They might tell me they don’t have time, or the subject isn’t interesting to them, or that they are already very familiar with the topic. But they would never excuse their refusal to engage with the material on the grounds that they’re not a “words person”. Yet bring up anything regarding mathematics, including dozenal, and one is rarely met with anything else. People simply *will not engage* with mathematics, and they excuse it as “not being a math person”, as if an inability to understand numbers was built into their very souls.

“I’m just not a math person.” Who hasn’t heard it a triqua times and more?

But this innumeracy is a real problem. The refusal to engage in mathematics on the grounds of some supposed innate inability to do so ramifies throughout society. People are constantly presented with statistical statements, cost-benefit analysis, technical

trials, and countless other data, and their ability to understand it and make decisions based on it is crucial to a properly functioning society. But refusing to engage with mathematics means an inability to perform these necessary tasks.

Paulos, in his famous book *Innumeracy*, gives the example of the weathercaster who predicted 50% chance of rain on Saturday and 50% again on Sunday, yielding a certainty of some rain that weekend. This conclusion, obviously, is flatly wrong; but when confronted with this conclusion, we can almost hear the response: “Oh, well, maybe not; I’m just not a math person.”

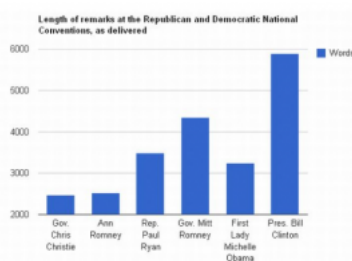
This particular issue might seem trivial; but at the same time, similar issues can be of great moment. Consider the political advertisement which states that *thirty-eight thousand Americans* will die in automobile accidents this year. They may even write it out in digits, 38,000, for additional weight, since numbers are apparently very scary for those who are not “math people”. The innumerate are terrified; what a huge number! We need a nationwide speed limit, more compulsory safety features, national licensing standards, an interstate safe-driving initiative!

And all of these may or may not be cost-effective means of reducing automobile fatalities, which is of course a goal that everyone wants to reach. Still, the numerate will note that, given the population of the United States, there is only an approximately 0.01% chance of dying in an automobile accident, which is higher than we would like but still quite unlikely. For comparison, there is a 0.15% chance of dying of cancer in a given year (an order of magnitude higher); know-

ing this, we may determine that there are much more urgent priorities for our attention.

None of this is to support or oppose any particular policy proposal; the DSA is *not* a political organization and presents no opinion on any of this. But unless we understand these numerical facts, we *cannot* make reasonable judgments about them, either way.

Careless or unscrupulous actors also regularly take advantage of our innumeracy with deceptive graphics which even a modicum of mathematical literacy would show to be completely false. Consider the following graph:



Click for Full-size Image

A lack of mathematical literacy makes this look like Clinton's speech was ten times the length of Christie's, three times of the length of Obama's, and twice the length of Romney's. But it's very deceptively labelled; it doesn't include zero. When we remember this, we can see that Clinton's speech was less than twice as long as Obama's, less than half again as long as Mitt Romney's, and only a bit more than twice as long as Christie's.

This is a trivial example, too—who really cares how long these people talked, if it was the right length for their topic?—but it's illustrative of a greater problem. Innumeracy makes it impossible to see these deceptive practices; an innumerate person really thinks that Hillary Clinton prattled on for ten times as long as Chris Christie did. Similar graphs might lead the innumerate person to think that we really spent twice as much money on x as we did on y , or that z is really three times a greater risk than q , when the reality is very, very different. They will make policy decisions, financial

decisions, voting decisions, purchasing decisions based on these notions, notions which are fundamentally and seriously wrong, all because they are “not math people”.

It is vital for *all* adults to be “math people”, at least to a certain degree. We will not all, nor should we all, be mathematicians; but a basic understanding of numbers and mathematics is just as vital to a civilized society as the ability to read and write.

So the point—at least, part of the point—is that dozenal helps make people numerate; it increases the mathematical literacy of those who understand and use it. Next month, we will see the ways dozenal can help begin to heal our innumeracy problem; and until then,

Happy dozens!

DOZENAL NEWS

OUR HIATUS

Many apologies for our long hiatus; over a year since our last *Newscast*! This was related to a very busy year in the personal life of your harried editor, for which he is very sorry. Hopefully, we will not have such a long delay again.

NEW SERIES OF DOZENAL VIDEOS

For approximately that last year, Youtuber Narbris has been producing excellent dozenal videos:

https://www.youtube.com/watch?v=b95T4AUPUA8&list=PLddU9tx9Yg1AAD1jJyzofG1ZUnWT_4t9P&t=0s

Using the do-gro-mo system to refer to numbers, and the

Dwiggins characters for trans-decimals, this series includes basic dozenal counting; arithmetic; and some of the most prominent characteristics of dozenal. Definitely worth a watch, and a great reference for those who aren't familiar with dozenal counting.

'LIFE WOULD BE SIMPLER IF WE COUNTED IN BASE 12.'

Medium, which we've cited as a source of the occasional base-twelve article before, has published another:

[https://medium.com/swlh/life-would-be-simpler-if-we-counted-in-base-12-do-you-](https://medium.com/swlh/life-would-be-simpler-if-we-counted-in-base-12-do-you-agree-with-this-is-statement-f88b7805fb78)

[agree-with-this-is-statement-f88b7805fb78](https://medium.com/swlh/life-would-be-simpler-if-we-counted-in-base-12-do-you-agree-with-this-is-statement-f88b7805fb78)

This article briefly reviews the history of numbers, the advantages of dozenal in divisibility and fractions, and is worth a perusal.

MORE DOZENAL DICE

Several issues ago we noted some 3d-printer patterns for dozenal dice; now they can simply be purchased!

<https://www.shapeways.com/marketplace/games/dice?tag=dozenal>

Made by “Brian's Dice”, they provide 18-sided; 10-sided; 1-20 sided; a pergross-die; a 12-sided; 30-sided; 40-sided, and, presumably just as a lark, an ϵ -sided. Make a purchase and play away!

SCALE NAME

TRADITION: DOZENAL

Justin Pecot (#901) has a list of dozenal names for musical scales:

<https://ianring.com/musictheory/scales/traditions/dozenal>

DOZENAL RPN CALCULATOR FOR ANDROID

Unum Designum has published a Dozenal RPN Calculator for Android:

https://play.google.com/store/apps/details?id=dozecal.unumdesignum.com&hl=en_US&gl=US&showAllReviews=true

Don't mind the reviews; most of them appear to be from people who don't understand how RPN is supposed to work. Just remember not to hit "enter" before your operation and you'll be fine. Uses "X" and "E" for ten and eleven.

NEW CALENDARS PUBLISHED

Our hiatus prevented the publication of our usual yearly monthly wall-type calendars and our weekly planners; but these are back for 1206 (2022)!

[https://www.lulu.com/en/us/shop/donald-goodman/monthly-calendar-for-the-](https://www.lulu.com/en/us/shop/donald-goodman/monthly-calendar-for-the-year-1206/paperback/product-mvvdqr.html)

[year-1206/paperback/product-mvvdqr.html](https://www.lulu.com/en/us/shop/donald-goodman/weekly-calendar-for-the-year-1206/paperback/product-e222q9.html)
[https://www.lulu.com/en/us/shop/donald-goodman/weekly-calendar-for-the-](https://www.lulu.com/en/us/shop/donald-goodman/weekly-calendar-for-the-year-1206/paperback/product-e222q9.html)

The wall calendar is a great conversation piece; and the weekly planner is an excellent way to put dozens into your daily life. We sell these items at cost; so make some purchases!

UNICODE SPONSORSHIP

We're excited to announce that the DSA has sponsored, at the

Bronze level, the Unicode characters "turned digit two" and "turned digit three", code points 218A and 218B:



These two characters were included in Unicode specifically for the purpose of supporting the dozenal system (the official Unicode description for both is "digit for 10 in some duodecimal systems" and "digit for 11 in some duodecimal systems"), and their inclusion was a big victory for the digital and international use of base twelve. As such, the Society Board voted to expend a small amount of funds to "sponsor" these digits, to gain some publicity for ourselves and to support the use of these characters in the community.

(These are *bronze* level sponsorships; silver and gold level sponsorships are quite expensive (\$1000.00 and \$5000.00, respectively). This would not be a good use of Society funds.)

SOCIETY BUSINESS

VOLUNTEERS NEEDED

As mentioned earlier, the DSA is an all-volunteer organization, and we pay no salaries. As a result, everything that we do comes out of the spare time of our members, time that they have to take away from their families, jobs, or other obligations.

We all love dozenals and enjoy assisting the Society in educating people about them; however, as the Society expands and does more, we find ourselves in need of more help.

Fortunately, the Society has a large membership with a very broad range of professions and experience. If you think you

can spare any time or effort for the cause of educating the world about dozenals, please let us know:

contact@dozenal.org

You can help as much or as little as you'd like. Thank you.

OUR NEXT BULLETIN

Ideas for the Bulletin? An article? A letter containing a question (common or uncommon) you'd like answered? An interesting math problem or puzzle? Send them in!

editor@dozenal.org

Remember that our *Bulletin* is designed to cover all aspects of mathematics, from the most basic to the most advanced, from a dozenal perspective, so no question or topic is too easy or too complex. Don't be shy!

ANNUAL MEETING

We do not presently have any plans to resume in-person board meetings this year, so we suspect that the annual meeting will again be virtual this year. The Board agreed last year that the annual meeting would be virtual, as well. More details as they get clarified!

POETICAL DIVERSION

For so many eons seeking, briefly at the truth just peaking,
'round the great Arithmos sneaking, hoping but to catch his gaze;

Now we boldly go a-hunting, Dozens all our fears a-blunting,
and with courage forward shunting, ready to all math explore,
ready over all the secrets of all numbers soon to pore;
fearing number nevermore.

Love of math at last resuming, our excitement ever blooming,
Where our fears o'er us were looming, now the sun and rainbow shine;
Hope, enthusiasm shining, radiant with love a-signing,
Dozens all of math untwining, ne'er again to be a bore;
Ne'er again to torment us with deep, impenetrable lore;
Quoth the Dozen, "Nevermore."

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 \$16; (\$18.) 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, John Volan, at

editor@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, which is 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; as such, your contributions may be tax deductible under applicable law.

Thanks again for your assistance; it's your donations that keep the DSA going. We can't keep doing it without you.

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. The exception is *Basic Dozenal Arithmetic*, which is a private production.

Item	Price (\$)
Dozenal Wall Calendar, 1206	12.07
Dozenal Planning Calendar, 1206	10.44
TGM: A Coherent Dozenal Metrology	8.00
Manual of the Dozenal System	3.46
A Dozenal Primer	4.50
Basic Dozenal Arithmetic	15.00

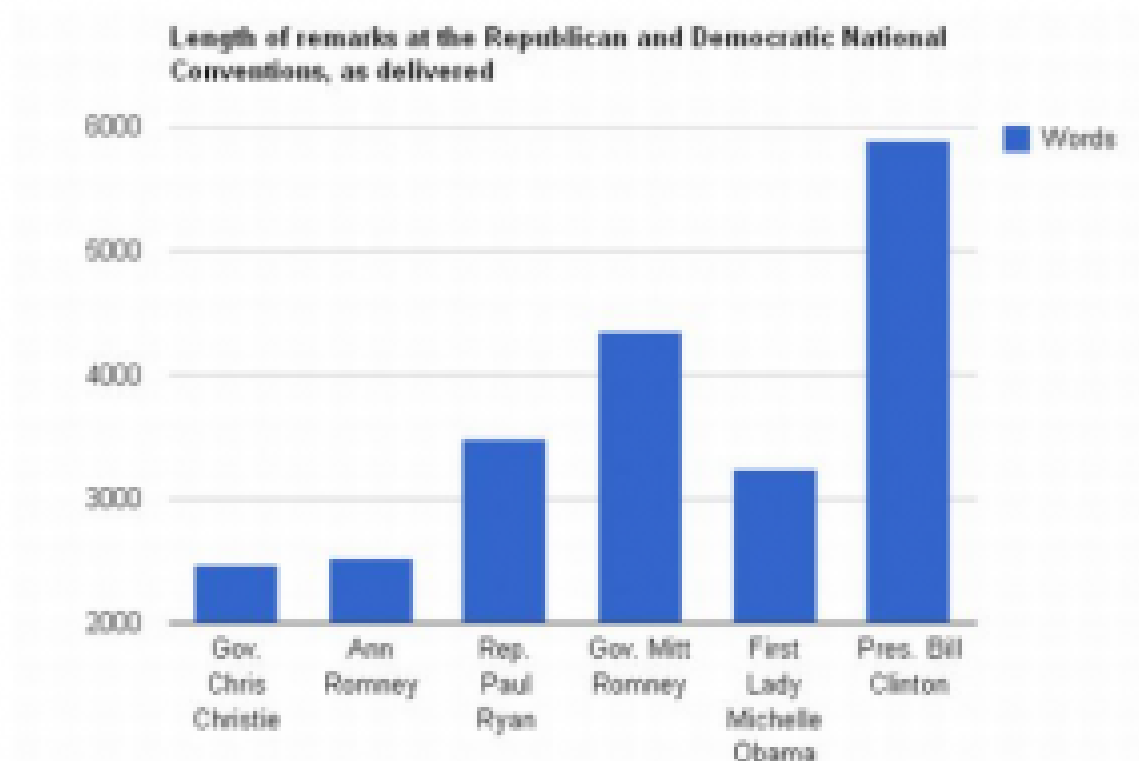
Prices are, unfortunately but by necessity, in decimal. If for some reason the links above do not work, simply go to:

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

and enter the appropriate terms. E.g., 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 future.

EACH ONE, TEACH ONE



[Click to return](#)