

WHO WE ARE

AS A VOLUNTARY and nonprofit corporation, the DSA consists of members and a board of directors, serving three-year terms. The board of directors elects a slate of officers who serve one-year terms. All members are eligible to pursue seats on the board of directors as well as officer positions.

WHAT WE DO

THE DSA furthers its mission in a number of different ways, offering avenues for any level of participation, from leadership roles to simply supporting with dues and reading.

- Recently, we began publishing a monthly newsletter, *The DSA Newsletter*, containing news, events, and informal thoughts from members.
- Educational programs regarding mathematics in general and alternative bases in particular.
- Republishing older works regarding base twelve.
- Publishing new works, and making available software and other tools, for working in base twelve.
- Our flagship publication, *The Duodecimal Bulletin*, in continuous publication since 1161 (1945.).

BASIC TEXTS

James Malone. "Eggsactly a Dozen." <http://www.dozenal.org/drupal/content/eggsactly-dozen>.

Gene Zirkel. "Decimal-Dozenal Conversion Rules." <http://www.dozenal.org/drupal/content/decimal-dozenal-conversion-rules>.

Gene Zirkel. "A Brief Introduction to Dozenal Counting." <http://www.dozenal.org/drupal/content/brief-introduction-dozenal-counting>.

Jay Schiffman. "Fundamental Operations in the Duodecimal System." <http://www.dozenal.org/drupal/content/fundamental-operations-duodecimal-system>.



THE DOZENAL SOCIETY OF AMERICA
708 ORCHARD STREET
MARTINSVILLE, VA 24112
<http://www.dozenal.org>



THE DOZENAL SOCIETY OF AMERICA

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.

Incorporated in New York State in 1161 (1945.), for nearly six dozen years the DSA has pursued this mission. From the early years producing tables of logarithms, trigonometric functions, and other essential tools; to modern efforts to create software and digital media; and in the publication of its flagship journal, *The Duodecimal Bulletin*; the DSA has furthered the study of alternative bases, particularly twelve, more than any other organization. Will you consider joining us?

WHAT IS DOZENAL?

DOZENAL is counting in twelves, rather than in tens. Instead of counting “one through ten,” then “eleven through twenty,” and so on, we count “one through dozen,” “dozen-one through two dozen,” and so on.

To do this, we need two new characters; we will use “Z” for “ten” and “G” for “eleven.” (Often, these are written simply as “X” and “E.”) We count so:

0	1	2	3	4	5	6	7	8
9	Z	E	10	11	12	13	14	15
16	17	18	19	1Z	1E	20	21	22

This is read “nine, ten, eleven, dozen; dozen one, dozen two, dozen three...dozen nine, dozen ten, dozen eleven, two dozen; two dozen one, two dozen two...”

Think of it like crates, boxes, and cartons of eggs, which we always pack by the dozen:

Crates	Boxes	Cartons	Eggs
7	Z	E	5

Each carton holds a dozen eggs, each box a dozen cartons, and each crate a dozen boxes. Dozenal counting is simply this: counting in units and powers of twelve. For a quick (single-page) and easy but thorough explanation of this, see “Eggsactly a Dozen” by the DSA’s James Malone (a URL is printed on the back of this pamphlet).

HOW TO SPEAK IN DOZENS

THERE ARE many ways to do this; one of the most popular is “Systematic Dozenal Nomenclature.” SDN uses the Greek roots known well from common words and chemical element names and applies them to dozenal.

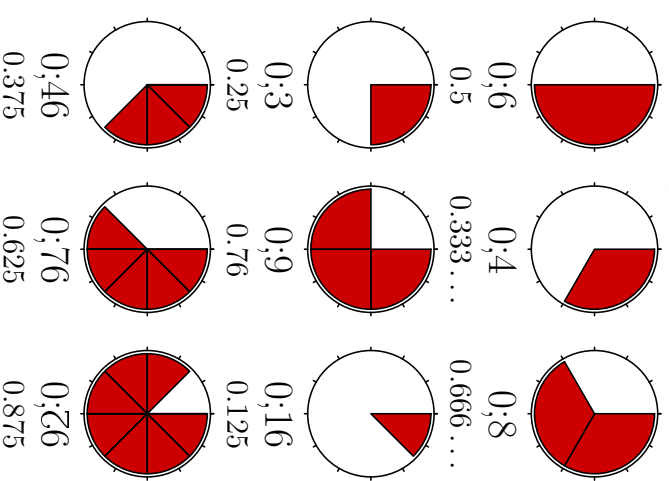
n	Word	10^n	10^{-n}
0	Zero	Nilqua	Nilcia
1	One	Unqua	Uncia
2	Two	Biqua	Bicia
3	Three	Triqua	Tricia
4	Four	Quadqua	Quadcia
5	Five	Pentqua	Pentcia
6	Six	Hexqua	Hexcia
7	Seven	Septqua	Septcia
8	Eight	Octqua	Octcia
9	Nine	Ennqua	Ennacia
Z	Ten	Decqua	Deccia
E	Eleven	Levqua	Levcia
10	Twelve	Umilqua	Umilcia

So “500” (five dozen dozen, zero dozen, and zero) is “five bigua.” “763Z” (seven dozen dozen dozen, six dozen dozen, three dozen, and ten) is “seven triqua six three ten.” When there are fractions, use “;” rather than “.” and say it “dit”; so five and a third is “five dit four” (5;4).

Or, if you prefer, use the old words “dozen,” “gross,” and “great-gross.”

WHY STUDY DOZENS?

THERE ARE many advantages to counting in dozens rather than in tens. The clearest is *easier fractions*. For example, dozenal has *clean thirds*; that is, thirds terminate (0;4 and 0;8), unlike decimal’s 0.333... In fact, *all* integers 1–10 (twelve, in base twelve) except for 5, 7, Z, and E have simple, terminating fractions in dozenal; you can see a few examples here:



This a great convenience, and dozenal brings many more; learn more at <http://www.dozenal.org>.