THE DUODECIMAL SOCIETY OF AMERICA

is a voluntary nonprofit organization 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.

Full membership with voting privileges requires the passing of elementary tests in the performance of twelve-base arithmetic. The lessons and examinations are free to those whose entrance applications are accepted. Remittance of $5, covering initiation fee ($3) and one year’s dues ($3), must accompany applications.

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The Duodecimal Bulletin

All figures in italics are duodecimal.

DUODECIMAL BIBLIOGRAPHY

by Lewis Carl Seelbach and Ralph H. Beard

This bibliography is in the form of an alphabetical list of the names of authors of works on duodecimals, and of works that contain some reference to them. It is a summation of the information that we have been able to assemble. But, while it is fairly comprehensive, it cannot claim to be exhaustive. Research on the bibliography will continue, and additions to the list are earnestly solicited, as well as any corrections. Material published in the Duodecimal Bulletin up to the end of Vol. 7, is included.

Following the alphabetical list is a brief chronology of the works prior to the year 1800, and a list of the available mathematical tables of duodecimals, arranged according to subject.

We wish to express our indebtedness to Paul North Rice, Chief of the Reference Department of the New York Public Library, and to Dr. Raymond Clare Archibald, of Brown University, for their many valuable additions to the list.

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p. 60.

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Degrees, etc., to duodecimals of circle,
George S. Terry, Duod. Arith., p. 63.
Duodecimals of circle to degrees, etc.,
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Conversion of Fract onals, decimals to duodecimals, .000 to .999,
Addition method,
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Addition method,
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Exponential Function

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Factorial Function,
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Factorials 1 to 20 and Their Reciprocals,
George S. Terry, Duod. Arith., p. 25.

Factors, see Primes

Fractions and Fractionals,
One-half to one-twelfth, decimal and duodecimal,
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On bases two to twelve.

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see log Sines, etc.
see Circular measure for radians.

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9 places, George S. Terry, Duod. Arith., p. 117

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Primes less than 600, George S. Terry, Dozen System, p. 36.

Powers of Numbers (also see Squares and Cubes,)
Powers 1 to 10 of numbers 2 to 2, and their reciprocals,

Primes
1 to 100, F. Emerson Andrews, New Numbers, p. 116.
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1 to 100, F. Emerson Andrews, New Numbers, p. 47.
1 to 1000, George S. Terry, Duod. Arith., p. 23.

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COUNTING IN DOZENS

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

Our common number system is decimal - based on ten. The dozen system uses twelve as the base, which is written 10, and is called do or dozen. The quantity one gross is written 100, and is called gro. 1000 is called no, 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 duodecimal counting. For example, 256 is 2 gro 6 do 5, 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.

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

94 136  
31 694  
96 382  
90 1000  

You will not have to learn the dozennial table, since you already know it. Mentally convert the quantities into dozenns, and add them down. For example, 7 times 9 is 63, which is 5 dozen and 3. So add up 63. Using this "method", you will be able to multiply and divide dozennial numbers without referring to the dozennial multiplication table.

Conversion of small quantities is obvious. By simple inspection, if you are 35 years old, dozennially you are only 29, which 12 x 2 = 24 is two dozen and eleven. For larger numbers, 12 x 3 = 36, keep dividing by 12, and the successive remainders are the desired dozennial numbers. 12, 17, 10, 9, 8, 5 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 12² (or 144) times the third figure, plus 12³ (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 12, and the successive remainders are the desired decimal number.

Fractions may be similarly converted by using successive multiplications, instead of divisions, by 12 or 10.

### Numerical Progression

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### Multiplication Table

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