1X

COUNTING BY DOZENS.

0	1	2	3	4	5	6	7	8	9	X	#	10
zero	*one*	*two*	*three*	*four*	*five*	*six*	*seven*	*eight*	*nine*	*dek*	*el*	*one-0*

Our common numeral system is based on ten units; also called the fingers system. The dozen-base is composed of twelve units. Still shown as *10*, one-0, one dozen, or the simple musical note ***do***. The quantity of one gross is written *100*, one-0-0, one gross, one ***gro***, sometimes the musical note ***re***. A greatgross is written *1000*, one-0-0-0, greatgross, one ***mo***, or as a greatgross prefix the musical note ***mi***. In our customary counting, the places in numbers represent successive powers of ten: that is, in 365 the 3 designates hundreds; the 6, tens; and the 5, units.

Place value is equally important in the dozenal system. For example, *265* represents *2* gross, *6* dozen and *5* units. Observe the following additions:

94	*9;4*	*136*	*1;36*	(5 ft. 9 in.)	*5;9'*
31	*3;1*	*694*	*6;94*	(3 ft. 2 in.)	*3;2'*
96	*9;6*	*3#2*	*3;#2*	(2 ft. 8 in.)	*2;8'*
19#	*19;#*	*1000*	*10;00*	(11 ft. 7 in.)	*#;7'*

Conversion of small quantities is obvious. By simple inspection, if you are 35 years of age, you are, dozenally, *2#* or two dozen and el years; and if you are 46 years old, you might still feel as young as *3X*. A *centenarian* is only *84* years old.

For the larger base-ten numbers, keep dividing by 12, the successive remainders being their matching dozenal base numerals, thus:

Decimal to dozenal:

12) 365
12) 30 + 5
2 + 6 Ans. *265*.

Dozenal to decimal:

X) 265
X) 30 + 5
3 + 6 Ans. 365.

One *bimo* is *1 000 000*. One ***trimo***, *1 000 000 000*.

The Duodecimal Bulletin

Whole Number *41*
(J.D. 999350)

Volume *25*, No. *1*
April 1974 *(1186)*

THE DUODECIMAL SOCIETY OF AMERICA

Sec'y, 4728 Cielo Drive, Huntington Beach, Cal 92649
Treasurer, 1580 S. Milwaukee St., Denver, Colo 80210
Editor, 10 State Street, Council Bluffs, Iowa 51501

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.

Senior membership with voting privilege requires passing of elementary tests in the performance of a dozen-base arithmetic. Lessons and examinations are free to those whose entrance application is accepted. Remittance of $6 dues for one year must accompany application. Forms free on request.

The Duodecimal Bulletin is an official publication of the Duodecimal Society of America, Inc., 4728 Cielo Drive, Huntington Beach, CA 92649. C.S. Bagley, Chairman of the Board of Directors, H. C. Churchman, President; Tom B. Linton, Secretary; Eugene M. Scifres, Treasurer. Permission for reproduction may be granted upon application. Separate subscription rate $3 per year.

TABLE OF CONTENTS

The Duodecimal Bulletin

All figures in italics are duodecimal.

ANNUAL MEETING OF 1973 AND MEETING OF THE BOARD

The Duodecimal Society of America assembled at its new headquarters, 4728 Cielo Drive, Huntington Beach, California, on 29 December 1973, at 0900h. It was called to order by Henry C. Churchman, President of the Society. Among the members present were Charles S. Bagley, Tom B. Linton, Jamison Handy, Jr., Frieda Butler, and John L. Selfridge.

Minutes of the last annual meeting read and approved.

Reports by Charles S. Bagley and Tom B. Linton, as officers, and Henry Churchman as editor of the Bulletin, were given and approved. Report of the Treasurer, Eugene M. Scifres, was read by Tom B. Linton and approved.

It was again urged by Henry Churchman that the system espoused by M. Jean Essig, contained in the book "Douze, Notre Dix Futur", Dunod, Paris, 1955, be studied extensively by members of this society, and urged upon the decimal metric world as involving the least change in methods, nomenclature, or current usage. The customary measures and weights and the decimal metres, liters, and grammes would be modified and translated into Essig's system by a joint academy of dozeners. With only a change here and there, initiated or foreseen by Essig in his lifetime, his "Twelve, Our Modern Ten" was believed to have immense potential for popularizing dozenal counting. The Bell Telephone System's alternates of ✱ and # as single symbols gradually to replace ten and eleven were hailed as indicators of a move by private enterprise in America towards

the dozen base. Praised as a tremendous advance.

Tom Linton discussed the 7-segment display electronic calculator, pocket size, and demonstrated one he is studying for conversion to dozenals, and possibly employing other bases. For dek, the seven segment calculator might use a lower case "d", the lower half shown as a square; and for el perhaps the upper case "E", resembling the 8 without the righthand vertical line. All present symbols shown with *italic* slant would be continued, including *d* and *E* representing what we call dek and el, respectively. Linton also discussed events at the Measurement Conference he and Handy attended at Cal Poly, San Luis Obispo, California, in November of 1973. The SI measurements and weights were given much attention, their good points being extolled with no mention made of the system's faults and failures with respect to time, circle, sphere, calendar, and money, to mention a few.

Jamison Handy advised that the Annual Measurement Conference which he and Linton attended in November 1973 at Cal Poly University was recorded by Handy on Sony tape. Professor Paul Scheffer, who arranged for the conference, asked attendees for comments. Linton in reply to the professor in reference to Metrics suggested duodecimal participation to touch on the problems and to present the base-twelve improvements possible. Possibilities were F. Emerson Andrews to present the historical perspectives of base-twelve, Handy his views, and Linton the engineering aspects of the base-twelve metric system at the 1974 Measurement Conference. All of which suggests progress.

John Selfridge suggested a revision of the back page of the Duodecimal Bulletin to simplify presentation of the dozenal system of counting to all newcomers. Perhaps we should not try to tell too much too soon, thus scaring away the timid enquirers. Professor Selfridge reported on his studies

of calendar reform. Expressed interest in the advancement of the telephone * and # symbols to represent dek and el in dozenal counting, as well as the 7-segment *d* and *E*. All equally desirable.

Charles S. Bagley called to our attention his remarks at Alamogordo that a king's foot had a potential life of perhaps forty years, whereas three measurements of the meridian arc from equator to pole in 1958 by three different teams each resulted in a different length. He advocated wavelengths of krypton 86 now used to describe the SI meter as more stable than a king's foot or a gravity foot.

Frieda Butler urged a more intensive effort to increase our membership among women, especially in the field of teachers of mathematics. A study is to be undertaken on ways and means. Very helpful.

At *796* (3:35 PM), it was moved and seconded that a recess of the annual meeting of members be taken until ten hundred hours on 30 December 1973. Carried.

Board of Directors Meeting.

The Board of Directors of DSA was called to order by its Chairman, Charles S. Bagley, at Headquarters of DSA at 4728 Cielo Drive, Huntington Beach, California, at *803* (4:02.5 PM) on 29 December 1973.

A roll call disclosed presence of the following board members: Charles S. Bagley, Henry C. Churchman, Jamison Handy, Jr., and Tom B. Linton. The chairman declared a quorum present, legally sufficient to conduct business.

Reading of the minutes of the last meeting was dispensed with on motion.

Henry Churchman, Editor, reported at least one bulletin a year was published under the editorship of Ralph H. Beard, Jamison Handy, Jr., or Henry Churchman from 1962 to 1972, usually running some

months behind. A dozen bulletins produced during this time were bound into one book, hard back, by the editor and perhaps half will be distributed thru him among the younger and more active members with at least one book going to the United Kingdom and one to New Zealand. He has sufficient material for another bulletin, which will be distributed in the Spring of 1974 and contain notes on this meeting. He plans to do two or more in 1974, hopefully four.

Bulletin now composed of two dozen pages; postal office requirement is minimum of 22 pages in order to qualify for book-rate---and library rate within U. S. Notice introduction of Julian Day at top of each page, following up ideas of Senior Member Robert Davies. Will appreciate more contributions to the bulletin to aid posterity, hopefully.

Tom Linton, Secretary, reported that in response to requests over 2000 Excursions were mailed out in 1973 and 150 notices to the general meeting. A few of the latter came back with wrong addresses and no forwarding card. Suggested revision of the Excursion pamphlet to include Application for Membership. All advertisements mentioning FREE materials will suggest POSTCARD ENQUIRIES, to simplify handling. He suggested each member check his local library to see if DSA is listed in the reference book of Associations. Also mentioned were the new single symbols * and # now found on the telephone Touch-Tones---he suggested that we encourage the telephone company to call these dek and el, and we should employ these symbols for dek and el as much as we can.

Election of Officers

The following were elected to the Board of Directors, to-wit:

Class of *1188* (1976):

Frieda Butler, P.O. Box 6554, San Diego, CA 92106.

Kingsland Camp, Shelburne-Murray Hill Hotel, New York, N. Y. 10016.

Tom B. Linton, 4728 Cielo Drive, Huntington Beach, CA 92649.

John Selfridge, Northern Ill. Univ., DeKalb, Illinois 60115.

Administration

Chairman of the Board of Directors, Charles S. Bagley, 1314 Ohio Avenue, Alamogordo, New Mexico 88310, was reelected.

The following other officers of the Society were elected:

Henry C. Churchman, President, 10 State Street, Council Bluffs, Iowa 51501.

John Selfridge, Vice President, Northern Illinois University, Math Department, DeKalb, IL 60115.

Tom B. Linton, Secretary, 4728 Cielo Drive, Huntington Beach, California 92649.

Eugene M. Scifres, Treasurer, 1580 South Milwaukee Street, Denver, Colorado 80210.

Henry Churchman was reappointed Editor of the Duodecimal Bulletin by Chairman Bagley and authorized to publish at least three bulletins in 1974.

Stanley Bumpus, c/o Bettis Atomic Power Laboratory at 237 S.M.R. Building, West Mifflin, Pennsylvania 15122, was appointed by the Chairman to assist the editor. He will welcome your articles, especially contributions to Intelligence Items and computer ideas, and anything advancing use of dozens.

New Business

Tom Linton urged greater interest by members in changes now taking place in our system of weights and particularly measurements: "We are the life and breath of the metric system---we can solve the

faults of the ten-base metric system in measurements of time, angle, circle, geography, etc. The present metric system, solely by its ties to base-ten, is missing popular approval by the customary measurement enthusiasts."

Alternate Symbols

Tom Linton moved, seconded by Churchman, that *d* for dek, and *E* for el, be favored as acceptable alternates for ↊ and ↋, especially when used as 7-segment computer dozenal numerals and in other dozenal electronic equipment. Carried.

Henry Churchman introduced the following resolution: Resolved by the board of directors that the printed symbols ⅄ and ⅁ be favored as acceptable alternates for ↊ and ↋, and be referred to, respectively, as "dek" and "el". This shall not compel anyone to abandon *d* or any other symbol for dek, or *E* or any other symbol for el. Seconded by Jamison Handy, Jr., and adopted.

On motion, the Chair appointed John Selfridge to aid Linton in development of a calculator in base-twelve and other bases.

The Secretary read a letter from F. Emerson Andrews concerning reprints of "My Love Affair With Dozens", authored by Andrews. The story is now told in his new book, "Foundation Watcher."

The Secretary read a letter from Gene Zirkel dated 27 November 73 concerning metric bumper stickers. Gene is professor of mathematics at Nassau Community College, Garden City, New York, and had written to the President of the National Council of Teachers of Mathematics.

John Selfridge, who is interested in number theory, reported on his study of calendar reform.

Editor Churchman expressed his appreciation of the work of Robert Davies, especially for making practicable the use of a Julian Day number for

each issue of the Bulletin.

The Secretary read letters from B.A.M. Moon, and Stanley Bumpus, and Albert Leibenguth, expressing interest in the progress of the society and some particular dozenal subject. It should be remarked that a letter often conjures up that writer as if he were present. All were thanked by Chairman Bagley for their epistolary contributions.

A letter was read by the Secretary from Ralph H. Beard, one of the Founding Fathers of DSA, now on a South American tour, urging erection of a Dozenal Academy composed of mathematicians versed in base-twelve counting and dedicated to its advancement worldwide. Our overworked Secretary, in cooperation with Selfridge and Zirkel, were delegated full authority to realize this most desirable goal.

It was the sense of the board that choosing the place of our next annual meeting should be left to our very active Secretary, hopefully with sufficient advance notice to attract as many members as possible. A university campus was favored, but it was not so limited as to foreclose other possibilities. Write him if you desire to host a meeting.

On motion the board of directors meeting was adjourned sine die at *(900)* nine bi-heures (1800h) on the 29th day of December 1973.

All present then repaired to the dining room of the beautiful Sheraton-Beach Inn, at Huntington Beach, California, where a dinner recommended by our Secretary was greatly enjoyed amidst lighter conversation, with the Pacific Ocean scarcely one-half a *kilomètre duodécimal** beyond. And it might be added, with temperatures hovering at a pleasant zero degree HAWAII (68°F), certainly a Garden of Eden.

*1 duodecimal kilometre is generally equated with 6336 International feet---exact within 0.00033.

DSA Annual Meeting, *26* Dec *'85*

On 30 December 1973 at *500* Momentes (1000^h), the Duodecimal Society of America, pursuant to yesterday's adjournment, was called to order by President Henry Churchman. Among those present at DSA headquarters were board members Frieda Butler, Tom B. Linton, Jamison Handy, Jr. and Henry Churchman.

Reading of minutes of the previous meeting was dispensed with on motion.

Minutes of the Board of Directors meeting of 29 December 1973 were read and duly approved in each and every detail. New officers installed.

Churchman suggested a simplified dozenal system of measurements which might prove popular among an embattled group of farmers opposed to the base-ten metric measurements, perhaps to be introduced as a bill in the Congress. Acres in various crops might be used interchangeably with Essig's suggested unit, a duodecimal hectare, one hundred of which in terms of farming would equal one square mile, 640 acres, or one Section of Land, within a degree of accuracy of perhaps 0.00033, an average surveyor's generally required precision. He will propose a sample of such bill at the next annual meeting.

Other matters calculated to advance dozenal arithmetic kept the members busy until 1430^h (*730* Momentes), 30 December 1973, at which time, on motion of Handy, seconded by Linton, the annual gathering of the Duodecimal Society of America was adjourned sine die.

Following adjournment, Tom B. Linton, our genial Secretary, hosted a buffet lunch which was ravenously devoured.

-o-0-o-

CANOPUS IN ARGO

By Alexander Craig Aitken

The sky is a sea tonight; the moon's white prow
Plunges amid the cloudy waves and shakes
A silver spray afar; then clear she breaks
From close pursuing surge, draws free, and now
Sails into wide translucencies where, deep
Beyond all sounding, fish ethereal sleep;
Now threads a mottled archipeligo
Of wandering isles that merge and melt and flow.

Late in the silent dark, from sleepless bed
I watch, and am aware of inward seas,
Now halcyon calm, that once were overspread
With fire and tempest; there in tranquil ease
White Argo forward glides, safe to have fled
Whirlpool and reef, and the Symplegades.

Furnished by Bruce A. M. Moon, Director of the Computer Centre, University of Canterbury, Christchurch, New Zealand, whose obituary of Alexander Craig Aitken is published elsewhere in this issue of the Bulletin, the above sonnet reveals the poetic insight of a great mathematician. May his hovering spirit remain to guide many future dozenalists to safe and serene harbors.

--Ed

HAWAII ZERO IS TWENTY DEGREES CELSIUS

By John Jarndyce

If our energy crisis grows worse than was feared last winter (scary), it is quite possible that we shall hear more about that natural, neutral, healthy climate for every house in America---68° Fahrenheit. Hopefully, it should require a smaller amount of fuel in the colder months in the temperate zone than if we aspire to a higher degree, say 75° or 80° Fahrenheit.

The area of Los Angeles and the whole state of Hawaii hover near or average about 68° Fahrenheit (20° Celsius), I hear, throughout the year. Near that equable temperature of a Garden of Eden. No wonder people flock there like swallows to Capistrano during the frigid days elsewhere.

Fahrenheit degrees are more minute than Celsius degrees, and therefore more precise in registering even slight changes in temperature. In fact, 9/5 of one degree Fahrenheit equals one degree Celsius ---5/9 of one degree Celsius is said to equal one degree Fahrenheit. If we in America move to Celsius temperature readings, we shall lose some of our current precision, metrically damaging.

There is a possibility that we might move away from Fahrenheit readings but still keep all of the Fahrenheit advantages of measurement and precision intact. Let us note that this dozenal move, called "HAWAII" Temperature, would equate 20° Celsius (68° Fahrenheit) with *0*° "Hawaii" temperature. It would bring thoughts of Hawaii to every U.S. home.

The modern concept of zero or nought is no longer that of "zephyr" or "nothing", but rather it has come to mean a point midway between +5 and -5, or +40 and -40, as in a graph. We now are accustomed to the fact that there are quantities less than nought, especially in temperatures Fahrenheit or Celsius where -40° C is forty degrees Celsius

below the freezing point of water.

A man, statistically, may have no money and we can say that his wealth is represented by 0, but if he owes $50, his wealth is then shown as -50. Also, we have the common calendar years of 300, or -300 (before our common era)---600 exactly between them if historians will insert the year of A.D. 0, which still appears to choke them up or drive them to the couch.

With each Hawaii degree of temperature equal to one degree Fahrenheit, then 100° Celsius (boiling point of water or 212° Fahrenheit) would equal one gross degrees (*100*° H) Hawaii temperature. So 40° Celsius (104° Fahrenheit) equals *30*° H (three dozen degrees above Hawaii temperature). And *-30*° H is equal to the expression 0° C or 32° F, or three dozen degrees below Hawaii.

Now rolling downward below Celsius, -40° C which also equals -40° F would be equal to nine dozen degrees (*-90*° H) below Hawaii temperature. Noteworthy, -60° C or -76° F is the very equal of one gross degrees (*-100*° H) below Hawaii (two gross degrees, Hawaii or Fahrenheit units, below boiling point of water). Ranchers please note that cattle might be branded painlessly with a *freezing* iron at -94° F or *-116*° H, so I am told.

Significantly, -260° C (-436° F) is the equivalent of three gross, six dozen degrees (*-360*° H) below Hawaii. Incidentally this measurement of lack of heat was achieved by Sir James Dewar, a Scots chemist and physicist, as early as 1900 A.D. ---within *20* Hawaii degrees of Absolute Zero.

It is not necessary for scientists to abandon Absolute Zero all-positive degrees when *0*° Hawaii temperature (equal to 68° F) shall start to be put in use by the rank and file of Los Angeles or Hawaii. And a market in America for unemployed Fahrenheit scales of temperature now looms possible.

ACRES TO SUPPORT GARDENS?

By Bert Pardiggle

If all farmers, assessors, surveyors, and drafters of deeds in America are to be compelled to alter our ancient ground measurements from acres, we should be permitted to move to metric "Gardens of Land" --each garden equal to 6.4 acres or one percent of one square mile of farm lands. In science a garden of land is exact equal of a square plane whose sides are the precise length of *75 000 000;0* wavelengths of orange-red kr. 86 light. We could then describe crop areas by the number of square miles (Sections of land) per Congressional Township (such township equal of 36 square miles).

Every farmer's kin is familiar with measuring of one-tenth-miles (one-twelfth Aeromile) on the odometer of trucks and automobiles; and the one-tenth mile squared might be thought to equal one "Garden of Land," or one "Square Edon," or one percent of a statutory square mile in the U.S.A, in Canada, in England, in Australia, in New Zealand.

Let us consider an example: if the National Corn Growers Association national corn-picking contest showed a top of 267.45 bushels of number-two corn per acre, then simply by multiplying that sum by 6.4 (acres in one Garden of land) they might announce 1711.68 bushels per Garden---the equal of 171,168 bushels per square mile.

Instead of a contest plot of 25 acres, the association might describe it as equal to four Gardens of Land---25.6 acres of land or four percent of a square mile. A Frenchman in 1955 designated what is now said to equal a Garden of Land as one "**hectare duodécimal.**" As goes France, so goes the World.

ALEXANDER CRAIG AITKEN

A continuous source of encouragement to those working for the better understanding of dozens arithmetic and its advantages is to recall the many distinguished persons who have been included in their company. Amongst that number, none has a better claim to fame than Alexander Craig Aitken, late Professor of Mathematics at the University of Edinburgh, Scotland.

Born in Dunedin, New Zealand in 1895, the eldest of seven children of a humble grocer and grandson of immigrant Scots, Aitken was later to be reckoned by Whittaker (his renowned predecessor at Edinburgh) as the greatest algebraist since Cayley. His powers of mental calculation were considered by Hunter, Professor of Psychology at Keele, to be probably the greatest ever recorded. In the possession of these joint qualities Aitken was unique, surpassing even Gauss. Yet these were but two among many remarkable facets of a man who was to become a legend in his own lifetime, and, in his later years, a convinced advocate of the benefits of dozens arithmetic.

An uncle of Aitken had unusual ability as a calculator, and his father, who would call on his customers for orders, was reputed to commit them all to memory. The youngster was soon to surpass both and when on his first day at high school he learned a Latin vocabulary in one reading, he received the nickname of "Swotty" which, at least in his native Dunedin stuck for life. Yet the name was unfair and made him indignant since he did as little or less work than anyone else and his mother's pleading was necessary to convince his father that he should stay at school when he reached the age of fourteen, legal age for leaving.

He went on to get all the school prizes but one in his final year with particular distinction in Latin and French (which he preferred) as well as mathematics. University studies were soon interrupted by the First World War. On the troopship to Egypt, Aitken obtained the violin which was his treasured possession throughout his war service, later described so vividly in his book, "Gallipoli to the Somme" (Oxford 1963), perhaps the most evocative and sensitive of all books about that conflict.

It was as a sergeant on the Armentières front that Aitken performed the feat which later became much exaggerated in the telling. When the roll-book of his former platoon was lost in an action in which the casualties were heavy, he succeeded in recalling for his Captain all the details, including the full name and number of every man. Commissioned shortly afterwards himself, Aitken was twice wounded in an attack in which every member of his platoon was a casualty, his right foot shattered.

Invalided home, he resumed his studies at the University of Otago, graduating M.A. in 1920 and obtaining a teaching post in the Boys' High School. He applied himself equally to physical recovery, winning the provincial pole vault and high jump championships, on a foot which not long before he had thought never to use properly again. Encouraged to apply for a graduate scholarship, his success took him to Edinburgh where he was to work for the rest of his life, writing more than seventy papers and three text books and gaining many distinctions including Fellowship of the Royal Society. Yet Aitken himself reckoned he gave no more than one quarter of his attention to mathematics. Music, natural history, walking in the hills, his family and his students occupied much of

his time and Aitken remained a man of whom the University of Edinburgh recorded not only his "brilliant and wide-ranging intellect" but also "his essential humility and childlike directness."

Many stories are told of Aitken's prowess at mental calculation, such as the occasion in a game with his children when he correctly multiplied 987654321 by 123456789 (in decimals) and gave the answer in just a little over half a minute. Yet decimal arithmetic did not satisfy Aitken and searching for alternatives, he came strongly to support the duodecimal system not only for his own brilliant calculations but, to quote himself, for "the multifarious types of calculation which are the staple of life". He expressed his intention to do his very utmost to stop what he saw as the pseudo-reform of decimal currency and the metric system, when speaking on the B.B.C. Third Program and later he published "The Case Against Decimalisation" (Oliver & Boyd, 1962).

Sound though his arguments were, they could not penetrate the minds of those who had already committed themselves emotionally to the change. Yet the force of his argument still stands and will continue to do so: "Nothing inefficient, even relatively inefficient, will last indefinitely. Sooner or later some nation, strong in willpower, untrammelled by obsolescent tradition will see this. There have been revolutions in arithmetic already; there will be others. It is truly extraordinary that arithmetic should have been hindered so long by a vestigial remnant from anatomy, by the irrelevant circumstance that...we are born with four fingers and a thumb on each hand."

Amongst the last words of a brilliant but intensely human individual, this observation may be seen in time to have been the most significant. Literally worn out by his labours, Aitken suffered poor health in his last few years and in 1968 he died in his adopted city of Edinburgh. Few men better deserve the epitaph: Officer, Scholar, Gentleman.

B.A.M.M.

-o-0-o-

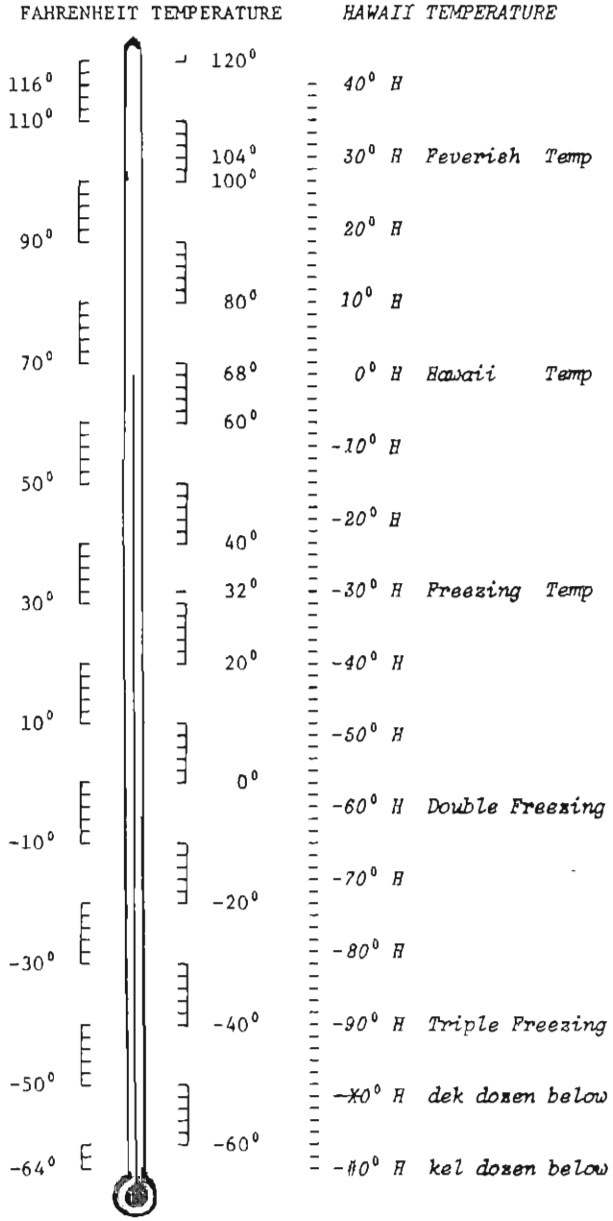
VALUED LETTERS FROM READERS:

TOM LINTON, 4728 Cielo Drive, Huntington Beach, California 92649, writes: "After my first exposure to the decimal metric system many years ago, I was convinced of its superiority, but further study and additional testing for some years has revealed to me its serious deficiencies. Most serious lack is the division of the circle, time, and common factors, making decimal equivalents and binary conversions clumsy. I summarize by saying that with non-metric engineering we out-designed and outproduced the metric countries in two worldwars.

GENE ZIRKEL, Associate Professor, Department of Mathematics and Computer Science, Nassau Community College, Garden City, New York 11530 writes: "Just received Bulletins *35* and *3k*. .... they are both excellent, especially Post Meridian On The Potomac and Grove's Telephone And Social Security Numbers. The meeting reports and the Index are valuable. The positive tenor certainly was reassuring, such as Boulder Concepts. *3* April *1185*.

-o-0-o-

Ni Koraspondas Esperante



THE ACCOLADE:

CHARLES S. BAGLEY, 1314 Ohio Avenue, Alamogordo, New Mexico 88310, was the first dozenalist to employ the word "navinaut" as the equal of one-edomo part of a great circle of the earth. Now that intensely appropriate word is coming to mean for all aircraft and ships at sea, like knots, a rate of travel. One navinaut has now been defined by one DSA member as the distance of one Aeromile travelled in one Momente. It is just an ear faster than 1/10th international mile in 4-1/6 seconds of time or exactly *750 000 000* wavelengths of orange-red krypton 86 light when navigated in fifty seconds. On land, this is roughly travel at the rate of 86.4 miles per hour. And so 5/8 Navinaut is the equal of 54 miles per hour, quite precisely--never over 55.

TOM LINTON, our active and overworked Secretary, took out a moment or two at the fruitful 1973 annual meeting of DSA in Huntington Beach, California, to compute the size of M. Jean Essig's hectare duodécimal (*75 000 000* wavelengths of orange-red kr. 86 light on every side) in relation to a Canadian square one-tenth mile, on his pocket-size electronic miracle reckoner. He demonstrated that a duodecimal hectare is larger than the square one-tenth International mile by only 0.00033 part---let's say three ten-thousandths or thirty-three one-hundred-thousandths part. Few surveyors achieve that degree of accuracy in the field.

-o-0-o-

The speed of light per Dot,
In Aeromiles, will score
About two-seven greatgross,
Two-two-three, dit four.

27 223;4

An Editorial in the Spring of 1974.

A PEACEFUL COALITION

of all base-ten and base-twelve metricists might prove to be mutually satisfactory, at least in America. We could help base-ten metrology in its duor (bi-heure) of need, by making kilometres closer to our customary miles, easily divisible by 2, 3, 4, and 6, and hence more acceptable to the American people of today. A Frenchman suggested it!

Metric advocates equally might help to introduce base-twelve metrology as a part of their effort to loosen the natural attachment of all peoples for the empirical foot. They need us. We need them. Let us reassess our own position. True, some of their leaders might double-cross us temporarily, but the American people can not live for long with the base-ten metre. It nauseates them.

The metric system is no less a metric system when it employs base-twelve instead of base-ten. So, while we are making the big change, let us do it as completely as possible at this time by implementing M. Jean Essig's duodecimal metres, decametres, hectometres, and kilometres (aeromiles).

THOMAS JEFFERSON, who as a member pushed the U. S. base-ten monetary system of dollars, dimes, new cents, and mills (prototypes of metre, decimetre, centimetre, and millimetre dimensions) through the Continental Congress in 1781, give or take a year or two, and who later became third President of the United States of America, himself employed the metric principles of base-twelve in designing and building his Retreat some sixty or seventy miles southwest of Monticello, about 1808. Visit it.

The width of each outside wall of his octagonal-shaped "Poplar Forest" retreat near Lynchburg, in

---

Note: The Dot is exact equal of 25/72nd part of one second of time---roughly fat 1/3 second.

Virginia, was the equal of Essig's modern duodecimal decametre (called 44 feet in Jefferson's day) divided in half, described then as 22 feet.

Moreover, all doorways were designed and built to take 44-inch doors (the equal of Essig's modern "duodecimal metre")----a splendid example of base-twelve metrology, still extant although a new roof replaces the original design destroyed by fire.

As said by Dr. FRANK DONOVAN, protagonist of a metric system in the United States and author of "Prepare Now For A Metric Future," 1970, Weybright and Talley, 750 Third Avenue, New York, New York 10017 ($5.95):

"A weakness of the decimal system is that ten is divisible only by 5 and 2, and divisions into thirds or quarters involves mixed numbers. *Under a decimal system with a base of twelve----which is divisible by 2, 3, 4 and 6---a sixth, a quarter, a third, and a half could be expressed by whole numbers.*" (p. 106, italics ours. --Ed)

Is it possible that it is already "Post Meridian on the Potomac?" After just 200 years of independence? Employment of the extremely perceptive observation of the astute Donovan throughout America could place the United States of America once more in a position of leadership in our modern world.

But were the government of the U. S. merely to push the base-ten metric system, as now being put forth, the people of this republic could be classified no longer as world leaders, but very patently as followers---and belated followers at that, trailing France by at least 150 years and more. America, awake. Take the lead if you can. --Ed.

-o-0-o-

A one-tenth statute mile in the U. S. squared is often called a Garden of Land.

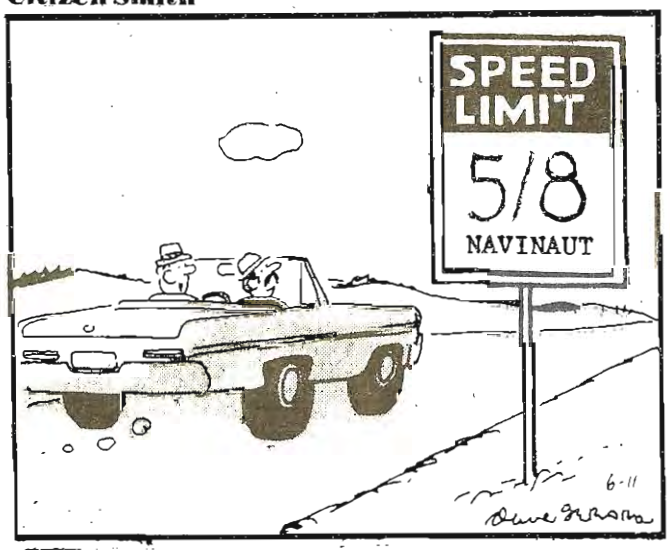
Information matter---dozenal Julian Days:

In late Winter of A.D. 1987 today's dozenal J.D. *999350* might read J. D. *9Ж0000,* and every 56 years thereafter plus 9 or 10 months, nine-dek-domo will in turn increase one domo at a time to equal *9Ж00-00,* then *Ж00000,* then *Ж10000;* and *Ж20000* about A. D. 2214. This number of days seems insignificant in terms of 25,800-year periods.

The duodecimal Julian Days could equal one gross domo days *(1000000)* about the middle of the 35th century perhaps, only then requiring employment of seven places, and would not require an 8-place number until long after three complete precessions of the equinoxes---over 80,000 years hence. The base-ten number of Julian Days, in 1974, requires a seven-place number, such as we find in 2442 160 base-ten Julian Day.

-o-0-o-

Citizen Smith



"That figures out to 55 miles per hour ---it saves a fraction of gas, too!"