D U O D E C I M A L

N E W S C A S T

Year 2
No. 1
January
*1174

The Duodecimal Society of Great Britain,
106, Leigham Court Drive, Leigh-on-Sea, Essex.

Contents

Editorial

At last the Society has held its first General Meeting -- and very successful it was too. A short account will be found on the next pages.

It is hoped that readers will like the new "tabloid" format of the 'Duodecimal Newscast' which makes for easier handling. Also the middle pages form a whole that can be extracted if wished or reprints easily run off.

Our first "central feature" of the new year is, topically, a new approach to the calendar by one of our members. This and other such signed articles do not necessarily state a Society policy: they are individuals' personal proposals which nonetheless merit consideration. Comments, criticisms and other proposals are earnestly invited in article or letter form.

Mr. McMullen has volunteered to start what could be a useful precedent: he is paying the cost of printing his pages (in this case *1£;00 shillings). Whilst it helps greatly to keep costs down, it will not be considered conditional to printing articles submitted. It would also be of help in editing if manuscripts could be typed as closely as possible in the proportions of a Newscast page.

Notes on F I R S T G E N E R A L M E E T I N G
*10 January 1174

As soon as we knew each other, it was agreed that Owen Tucker chair our Meeting. Louis Loynes generously made a room available to us which met the needs of a small but representative gathering -- six members and one observer (Mr. Punch of 'Punch'). This, our first and therefore important, not to say historical, Meeting considered past progress and future policies.

We looked back on duodecimal Press entries:

Letters in 'The Sunday Times'	8 - 1X	June	1172
Letters in 'The Times'	1E	April	1173
Article in 'Newsletter' of the Phonetic Alphabet Association		August	1173
Letters in 'The Economist'	3 & X	October	1173
Reference in 'Punch'	24	October	1173
Letters in 'The Listener'	17 & 22	November	1173
Letters in the 'Dublin Evening Mail'	7	December	1173 (and since)

The Secretary referred to the Beaver Committee correspondence (Will Members please pass on quickly the copies which have for some time been passing from one to another as a "circulator"), and the International Yard and Pound agreed by the standards laboratories of Great Britain, New Zealand, Australia, South Africa and the United States. Japan, India, China and South Africa have unfortunately already decided certain decimalizations and Australia and the Federation of Rhodesia and Nyasaland are investigating coinage.

In dozenal activities abroad, our very live elder-sister organization, the Duodecimal Society of America is doing a lot of useful work. Her members have taken duodecimals to Australia, New Zealand, China, Japan, the Pacific Islands and the Western States. France has an ardent duodecimalist in Jean Essig. The Gallic logic of his works is of great value and not only in French-speaking lands. Many members feel that discussions could profitably be made with the United States and France on several duodecimal points.

The latest financial report shows a clear Balance of 7EX;96 shillings (+£57. 10. 9½) which excludes the cost of this Newscast. Donations have, of course, helped considerably.

Total Income to date 935;X0 s. (+£66. 17. 10)
Total Expenditure to date 137;06 s.(+ £9. 7. 0½)

We started to consider the future by discussing the organization of the Society and used a draft set of Rules as a basis. This draft with alternative proposals where necessary will circulate with the next Newscast. It was agreed that the management of the Society should be according to the draft Rules, or, where they contain alternative proposals, as at present, until formerly ratified at the next General Meeting.

The Meeting agreed that the financial year should be rationalized and provisionally set to the Calendar Year with the possibility of resetting it to begin on a Spring date according to whichever membership wishes. Ordinary Members joining during a financial year shall pay a shilling a month (Young Members, 6d.) to cover them until the next financial year starts. It was agreed that, to bring present Members into line, they pay the appropriate sum at these rates to cover from the anniversary of their joining until *27 December 1174. The Meeting further agreed that the signature of the Treasurer and one other Officer of the Council be necessary to withdraw money from the Bank. We were reluctant to have an initiation grade or extra fee and we shall reconsider honorary membership later. We shall have a voluntary test and instruction available for those desirous.

Our Council for the coming year was elected as follows:

Chairman	Gilbert Adeney
Vice-Chairman	Charles Bishop
Secretary and Treasurer	Brian Bishop
Education and Publicity Secretary	Shaun Ferguson

Time did not permit a detailed discussion of activities. We did agree provisionally for practical purposes to continue using the same number symbols and the foot, pound and shilling as basic standards. All Members are urged to suggest schemes for new number symbols and names, for new units and standards and for the Society insignia. If these are written on separate sheets and sent to the Secretary, he can keep them together in appropriate files. We shall be able to exchange ideas by "circulator" and Newcast. Individual experience will be invaluable also if each member (a) explores duodecimal applications in his own specialization, e.g. computers, printing, weaving, football pools; (b) seizes every opportunity to write to the Press; and (c) personally introduces new people.

STOP PRESS

The Council met on 17 January and discussed a suitable leaflet and press articles for when the Beaver Report comes out (expected in a month).

M E M B E R S H I P -- New Members

Life Member -- Total 1

Mr. Van Allen Lyman c/o the Duodecimal Society of America
(Mr. Lyman sent a generous cheque, asking for Life Membership. This was approved at the General Meeting, but fee still to be fixed)

New Ordinary Members -- New Total *16

Mr. I. Donaldson — Farnhams Hall, Ware, Herts.
Mr. H. E. Hallwright, BScA — "Lowlands", 4387 Majestic Drive, R.R. 5 Victoria, British Columbia, Canada
Mr. L.J.A. Loynes — 6, Monmouth Street, London, W.C.2.

New Younger Member -- New Total 4

Mr. S. Ferguson — 47, Jerningham Road, London, S.E.14.

New Subscribing Supporters: plus two -- New total 5

S U B S C R I P T I O N S

At the General Meeting we agreed that subscriptions should be brought into line with the 1st of January (see page 3). Therefore as I send this Newscast out to each present Member I shall indicate in the margin the amount due for this year. Otherwise subscription rates for the whole year remain:

Ordinary Membership	one dozen shillings
Young Member	six shillings
Subscribing Supporters	rate as appropriate

Members joining during a year pay the proportion until the end of the year.

More donations are needed in cash or kind to be able to consider more ambitious enterprises. Members may care to add something to their subscription cheques, etc., which should be crossed payable to the Society.

L I B R A R Y -- Accessions

The Reverse Notation	(published 1155)	J. Halcro Johnston
The Dozen System	(1159)	George S. Terry
Byraz Colour Co-ordinating	(1173)	Louis Loynes

all generously donated by the authors

P I and e

The following approximation of Pi to *540 places is based on the E N I A C decimal computation and was first published in 'The Duodecimal Bulletin' X.1.7 in March *116X.

*3;184809493E91
8664573X6211 6E61E8E48X62
EE151551X057 253X88X50X43 1242426274444
29290X7809X4 EX0944572315 27091326X851
9274214OX6OX X387707E01X3 346467048191
55256X0661X0 92982210E748 9244X3500252
3753X3XX5480 095207139064 613891989625
5646880181X3 630797279495 949802E10856
683083272EEE 57X92E8868E7 0816E85966X9
XOX370E12265 73E3165X88EE E0632X8EX7X9
529X828903E4 63406EE57E0E X22E0958E1E3
E256E8403759 0995335E507E 2146E8650223
X71626E8X546 691845310018 077XX2E263X1
8762184 9E849 968X98161232 71888X826165
X8225616E442 56E6X89E20X0 394274EX9E67
796X31737E22 086X74620EEX E34X9X653437
9E2391489853 6E8618340608 28315056 4E85
943E87637256 X041E99X6E25 57X3277X8E43
16447236E027 10X789834843 1684X022899X
X421XX17X38E E8X0X9965729 593480 41X2X3
52X18X838E01 108651E26914
514X51144X23 382E74996918
315X3009X890 X80444899416
45495701 5E22

At the same time e was converted from the E N I A C value as

2;875236069821
9EX71971009E 014231EE98E9
388XX8766760 06X47X4350E5
2564272786EE 453024X21814
923E31032566 12979075EX5E
054257348716 42X0966688 13
7E0008877450 39643180633X
8E5442798843

A DUODECIMAL CALENDAR

By C. J. McMullen

If I date this article ǂ1173 October 18, it corresponds exactly to +1959 October 20, by mere conversion of numbers from one system to the other. Unless the duodecimalists of the future are prepared to miss leap years in years divisible by 84 but not by 294, this parallel will break down and +October 20 will no longer be ǂOctober 18 but will be ǂOctober 17 or 19. Therefore the suggestion that a new calendar be introduced should not be too ridiculous

(It has been suggested that Esperanto should be used by duodecimalists in their nomenclature. The units of time are therefore as follows: Jaro, a year; monato, a month; semajno, a week and tago, a day. The suffix -j is used for plurals. The letter J is pronounced as an English Y as in "young" or "boy". Other terms used are the "rejaro" or period of gro jaroj and a "superjaro" or leap year).

The Epoch of the new calendar is, decimally, 4 B.C. December 23 (Old style). This is within two tagoj of the most popular date of Christ's Birth and it also makes the first tago of the jaro fall on the Winter Solstice on the average. The era starts with jaro zero, not one. Likewise the first monato is numbered zero, (although it also has a name) and the first tago of the monato is numbered zero. This gives the sense, not of the "Year of our Lord" and the "month of the year", but of the "Age of our Lord", "age of the jaro" &c.

Our extra tago in the superjaro is added to the end of the jaro so that the jaro is undisturbed to the last. Similarly, when we miss a superjaro we want to do it at the very end of the rejaro, or period of gro jaroj. Thus it is logical to have superjaroj as jaroj ending in 3, 7 or E, but not ending in EE. One extra superjaro must be missed every eight gro jaroj and this is done in jaroj ending in 7E7, 13E7, 20E7, 27E7 &c. Stated in words the superjaro rule is: an extra tago is added to the end of the jaroj preceeding jaroj divisible by four, but not divisible by gro; a jaro is not a superjaro if it is five jaroj before one divisible by eight gro.

The lengths of the monatoj are altered so as to make them coincide as accurately as possible with the signs of the Zodiac.

Here are the number of tagoj in each monato. (The last tago in each monato is numbered one less than these figures - hence the last tago of Kaprikorno is Kaprikorno 25.):

Kaprikorno 26, Amforo 26, Fiŝo 26, Ŝafo 26, Bovo 27, Ĝemelo 27, Kankro 27, Leono 27, Virgo 27, Pesilo 26, Skorpio 26, Pafisto 26 (or 27 in superjaroj). Note on pronunciation: Ŝ is pronounced sh; Ĝ is as J in "jam"; all stresses on last but one syllable.

Dates, times or combinations of dates and times are always expressed with the larger unit first. Examples: 116E Ĝem. E or 116E; 5/E; Another date-time; 1175 Vir. 18;X620, or 1175;8/18;X620. For dates before Christ, a bar is placed over the jaro: $\overline{35}$ Fiŝ. 1E, pronounced "bar three do five Fiŝo do el."

Tables A,B,C and D are a PERPETUAL CALENDAR. To find the tago of the semajno carry out this routine. Find the index number corresponding to the rejaro in table A, the last two digits in the jaro in table B, the monato in table C. Add the sum of these three index numbers to the tago of the monato (cf. the day of the month) and extract the tago of the semajno against this final sum in table D. To find the Sunday letter of the jaro, use tables A and B in the same manner for the jaro and apply the sum to table E.

Table A

I.N.						
0	00	07	09	/	16	/
4	01	/	0X	/	17	/
1	02	/	0E	/	18	/
5	03	/	10	/	19	/
2	04	/	11	/	1X	20
6	05	/	12	14	1E	21
3	06	08	13	15	/	22

Table D

I.	Numbers' sum						
0	7	12	19	24	2E	36	Sunday (Dimanĉo)
1	8	13	1X	25	30	37	Monday (Lundo)
2	9	14	1E	26	31	38	Tuesday (Mardo)
3	X	15	20	27	32	39	Wednesday (Merkredo)
4	E	16	21	28	33	3X	Thursday (Ĵaŭdo)
5	10	17	22	29	34	3E	Friday (Vendredo)
6	11	18	23	2X	35	40	Saturday (Sabato)

Table E

I.N. Sum,		Sun. Letter.
0	7	G
1	8	F
2	9	E
3	X	D
4	E	C
5	10	B
6	11	A

Table B

I.N	
0	00 06 / 15 1E 24 2X / 39 43 48 52 / 61 67 70 76 / 85 8E 94 9X / X9 E3 E8 øE9
1	01 07 10 16 / 25 2E 34 3X / 49 53 58 62 / 71 77 80 86 / 95 9E X4 [illegible] // E9 øEX
2	02 / 11 17 20 26 / 35 3E 44 4X / 59 63 68 72 / 81 87 90 96 / X5 XE E4 [illegible] øEE
3	03 08 12 / 21 27 30 36 / 45 4E 54 5X / 69 73 78 82 / 91 97 X0 X6 / E5 EE /
4	/ 09 13 18 22 / 31 37 40 46 / 55 5E 64 6X / 79 83 88 92 / X1 X7 E0 E6 / /
5	04 0X / 19 23 28 32 / 41 47 50 56 / 65 6E 74 7X / 89 93 98 X2 / E1 E7 / /
6	05 0E 14 1X / 29 33 38 42 / 51 57 60 66 / 75 7E 84 8X / 99 X3 X8 [illegible] / / øE8

Table C

Monato	I.N.	Monato	I.N.	Monato	I.N.	Monato	I.N.
Kaprikorno	1	Amforo	3	Fiŝo	5	Ŝafo	0
Bovo	2	Ĝemelo	5	Kankro	1	Leono	4
Virgo	0	Pesilo	3	Skorpio	5	Pafisto	0

øfor use only in rejaroj 7, 13, 1E, 27 &c.

Example: 1159 Virgo X: From table A, 11 has index number 2; from table B, 59 has index number 2; from table C, Virgo has index number 0; add 2+2+0+X=12; from table D, 12 is Sunday.

CONVERSION FROM ONE CALENDAR TO THE OTHER. From old style (OS column) or new style (NS column) to duodecimal, convert the jaro into duodecimal figures and add two. Calculate the tago of the jaro from table F and apply the correction, shown in table G. If a December date becomes a Kaprikorno date, add one more to the jaro. Similar tables could be made for conversion the other way.

Table F: (divide the +year by four; the remainder is the column to use)

+ date	remainder one	remainder two, three	remainder zero
Jan. 1	Kap. X	Kap. 9	Kap. 9
Feb. 1	Amf. E	Amf. X	Amf. X
Mar. 1	Fiŝ. 9	Fiŝ. 8	Fiŝ. 9
Apr. 1	Ŝaf. X	Ŝaf. 9	Ŝaf. X
May 1	Bov. X	Bov. 9	Bov. X
Jun. 1	Ĝem. X	Ĝem. 9	Ĝem. X
Jul. 1	Kan. 9	Kan. 8	Kan. 9
Aug. 1	Leo. 9	Leo. 8	Leo. 9
Sep. 1	Vir. 9	Vir. 8	Vir. 9
Oct. 1	Pes. 8	Pes. 7	Pes. 8
Nov. 1	Sko. 9	Sko. 8	Sko. 9
Dec. 1	Paf. 9	Paf. 8	Paf. 9

Table G: (½ means "up to Feb. 28" or "from Mar. 1")

Years A_0D_0-A_0D_0	Corr. OS	Corr. NS	Years A_0D_0-A_0D_0	Corr. OS	Corr. NS	Years A_0D_0-A_0D_0	Corr. OS	Corr. NS
1 - 100½	-1	+1	1006 -1100½	+ 6	0	2014 -2100½	+12	+1
100½- 141	-1	0	1100½-1145	+ 6	-1	2100½-2157	+12	0
142 - 200½	0	+1	1146 -1149	+ 7	0	2158 -2200½	+13	+1
200½- 285	0	0	1150 -1297	+ 8	+1	2200½-2297	+13	0
286 - 300½	+1	+1	1298 -1300½	+ 9	+2	2298 -2300½	+14	+1
300½- 429	+1	0	1300½-1430½	+ 9	+1	2300½-2301	+14	0
430 - 500½	+2	+1	1400½-1437	+ 9	0	2302 -2445	+15	+1
500½- 573	+2	0	1438 -1500½	+ X	+1	2446 -2500½	+16	+2
574 - 600½	+3	+1	1500½-1581	+ X	0	2500½-2589	+16	+1
600½- 700½	+3	0	1582 -1700½	+ E	+1	2590 -2600½	+17	+2
700½- 717	+3	-1	1700½-1725	+ E	0	2600½-2700½	+17	+1
718 - 861	+4	0	1726 -1800½	+10	+1	2700½-2733	+17	0
862 - 900½	+5	+1	1800½ 1869	+10	0	2734 -2877	+18	+1
900½- 1000½	+5	0	1870 -1900½	+11	+1	2878 -2900½	+19	+2
1000½- 1015	+5	-1	1900½-2013	+11	0	2900½-3000½	+19	+1

Example: A_0D_0 1776 July 4. 1776/4 has remainder zero. From table F appropriate column, July 4 is Kankro 10; Apply 1776 to table G (NS) correction +1. Kankro (10+1)=11 +1776= x1040. Add2 Result: 1042 Kan.11

The ecclesiastical year that works alongside this calendar is for the fixed Easter variety. (Notes: Repetition of such phrases as "La unua dimanĉo post ....." would be tiresome to the English Speaking reader so the English forms are used. The term "moveable feast" is applied to feasts that move with Easter and always remain on the same tago of the semajno). Christmas is celebrated on Kaprikorno 0, as the Epoch of the Calendar is meant to be an approximation to the Birth of Christ. No other feast has effect on the sequence of Sundays that follow it, thus there are no "Sundays after Epiphany". The Sundays are regular from the First after Christmas to the Fourth in Advent. There is very occasionally a Fifth Sunday in Advent, but this is the only variable semajno. All moveable feasts are defined as being "the .....day nearest a certain date". If a calendar of a jaro of Sunday letter E is studied for all these moveable feasts it will be seen that the date in question falls on the tago of the semajno in question. If, for instance, schools would define the beginnings and endings of their terms using a jaro of Sunday letter E in this manner, they would have their terms not only of the same length jaro after jaro, but they would fall in the same position in the ecclesiastical calendar, (the former claim is not true if the term happens to be over Christmas). Likewise annual occurances that have to be on a certain tago of the semajno should be defined by the "Sunday Letter E" method.

The sequence of Sundays and moveable feasts and their definitions are listed in table H. To find the date of these feasts in any particular jaro, apply the corrections shown in table J to the date of definition.

To denote a position in the ecclesiastical year the following convention is used for week-days: the name of the previous Sunday, omitting the word "Sunday" followed by the tago of the semajno e.g. First after Christmas Friday, Easter Wednesday, Third in Advent Monday.

Table H

First Sunday After Christmas	is the Sunday	nearest Kap. 4
Second "		Kap. 11
Third "		Kap. 16
Fourth "		Kap. 21
Fifth "		Amf. 2
Sixth "		Amf. 9
Septuagesima		Amf. 14
Sexagesima		Amf. 18
Shrove Tuesday	Tuesday	Amf. 21
Ash Wednesday	Wednesday	Amf. 22
Quinquagesima	Sunday	Fis. 0

Quadragesima/First Sunday in Lent		Fîs. 7
Second Sunday in Lent		Fîs. 12
Third "		Fîs. 19
Fourth "		Fîs. 24
Fifth "		Saf. 5
Sixth "		Saf. 10
Maunday Thursday	Thursday	Saf. 14
Good Friday	Friday	Saf. 15
Easter Day	Sunday	Saf. 17
First Sunday after Easter		Saf. 22
Second "		Bov. 3
Third "		Bov. X
Fourth "		Bov. 15
Fifth " /Rogation Sunday		Bov. 20
Ascension Day/Holy Thursday	Thursday	Bov. 24
Sunday after Ascension	Sunday	Gem. 0
Whit Sunday/Pentecost		Gem. 7
Trinity Sunday		Gem. 12
Corpus Christi	Thursday	Gem. 16
First Sunday After Trinity	Sunday	Gem. 19
Second "		Gem. 24
Third "		Kan. 4
Fourth "		Kan. E
Fifth "		Kan. 16
Sixth "		Kan. 21
Seventh "		Leo 1
Eighth "		Leo. 8
Ninth "		Leo. 13
Dekth "		Leo. 1X
Elth "		Leo. 25
Doth "		Vir. 5
Do First "		Vir. 10
Do Second "		Vir. 17
Do Third "		Vir. 22
Do Fourth "		Pes. 2
Do Fifth "		Pes. 9
Do Sixth "		Pes. 14
Do Seventh "		Pes. 18
Do Eighth "		Sko. 0
Do Ninth "		Sko. 7
Do Dekth "		Sko. 12
Do Elth "		Sko. 19
Two Doth " /next before Advent		Sko. 24
First Sunday in Advent		Paf. 5
Second "		Paf. 10
Third "		Paf. 17
Fourth "		Paf. 22
Fifth " occurs if Pafisto 26 is a Sunday (about once in every 24 jaroj)		

Table J

Sunday Letter	Correction	Note
A	+ 3	
B	- 3	.....There is a 5th Sunday in Advent if a superjaro.
C	- 2	
D	- 1	
E	0	
F	+ 1	
G	+ 2	

ANNIVERSARIES AND BIRTHDAYS. To find the date of an anniversary of an incident, find the original date in terms of the Duodecimal Calendar, and celebrate it on that date every jaro. For example the Gunpowder Plot: +(1605 November 5 OS) which is E1E Skorpio 20 so the event is celebrated on Sko. 20 every jaro. For publicity the Society ought to have a firework display on Sko. 20 (Do tagoj late this jaro!), or commemorate the groth jaro after the death of James Watt (on 107E Leo. 22). The anniversary will be, decimally, on 1963 August 19. The Duodecimal Society of America could cause a stir by celebrating Independence Day on Kankro 11, two tagoj later than everyone else.

NOTES on the Calendar: (a) The tago begins at midnight Greenwich Mean Time, and this is 00;00 oretagoj everywhere. The change of dinner-time in Britain from 1.0 p.m. to 66;00 ert. will be neither harder nor easier than the change in Singapore from 1.0 p.m. to 29;00 ert. (b) The seasons begin on Kaprikorno 0, Ŝafo 0, Kankro 0 and Pesilo 0. In England, these would be the "Quarter Days". (c) Accuracies of the two calendars: Gregorian - one day in ≈3,300 years; Duodecimal: one tago in ≈4,400 jaroj i.e. ≈2;3 times as accurate. (d) Here are el famous dates expressed in the Duodecimal Calendar:

Battle of Hastings	750	Pes.	22
Signing of the Magna Carta	855	Kan.	4
Spanish Armada	E06	Ĝem.	- Vir.
Gunpowder Plot	E1E	Sko.	20
Restoration of the Monarchy	E66	Bov.	24
Battle of Trafalgar	1607	Pes.	24
Battle of Waterloo	1075	Ĝem.	22
Outbreak of World War 1	1138	Leo.	E
Armistice Day	1140	Sko.	16
Outbreak of World War 2	1159	Vir.	2
V.E. Day	1163	Bov.	15

NEW DUODECIMAL NOTATIONS

Many members have expressed dissatisfaction with our present number symbols. The following lists, firstly of proposals for a complete new set and then for a new dek and el should be of interest and inspiration.

0 -- E

Present convention	Louis Loynes	A. Chilton	S. Ferguson	A.D. Gautier (*10XX)
0	0 / Z 0 / M			0
1	I A			1
2	A B			2
3	B C			3
4	C D			4
5	D E			5
6	E F			6
7	F G			7
8	G H			8
9	H J			9
X	J / ⊥ K			X
E	K / ⊬ L			E

Z = zero
M = middle/twelve

'Les deux arithmétiques'

X & E

Name	date	X	E
Juan Caramuel Lobkowitz			
'Mathesis biceps' (strokes of 10 and 11 adapted to letters)	E50	p	n
D'Alambert and Buffon			
'Dictionnaire de la Grande Encyclopédie'		X	Z
Johannes Albertus Berckenkamp			
'Leges numerandi universales'	1017	q_1	q_4
Peter Barlow			
in 'Nicholson's Journal'	106X		
'Theory of Numbers' (Greek letters)	106E		
Vicente Pujals de la Bastida			
'Filosofía de la numeración (inverted 2 and 4)	1098		
'The Popular Encyclopaedia'	10E2	X	T
John W. Nystrom			
App. to 'Elements of Maths.'	1103		
Henry Martyn Parkhurst			
'The Plowshare' August	1115	X	
Sir Isaac Pitman			
'The Phonetic Journal'	10X8		
'The Phonetic Journal' (inverted 2 and 3)	10X9		
(Used throughout 'The Phonetic Journal for 10X9)			
'Bedfordshire Independent'	10X9	T	E
Harold Thayer Davis			
'A Course in General Maths.'	1135	T	E
Richard Courant and Herbert Robbins			
'What is Mathematics' (Greek letters)	1159	α	β
Lancelot Hoghen			
'Maths. for the Million' (biological symbols)	1161	♀	♂
Heinrich Teitze			
'Mathematische Probleme'	1165	Z	E
alternative (Greek letters)		χ	λ
Edna A. Kramer			
'The Main Stream of Mathematics' (punctuation marks)	1167	*	#

'Encyclopédie Larousse Méthodique' (Greek letters)	116E		
Jean Essig 'Douze notre dix futur'	116E		
Francisco M. Biosca in 'Enciclopedia Labor' (punctuation marks)	1172		

from 'Duodecimal Bulletins'

H. K. Humphrey	Bulletin No. 1.3	d	k
H. Roberts	2.1		e
Paul Van Buskirk	3.4		
	9.1		
H. G. G. Robertson	3.4		
"Mathamerica"	6.3		
G. Chrystal	8.2		
Redivivus	12.1		

from correspondence in 1173

T. Wood		
C.N. Jeffries alphabet letters (T(en) and XI adapted)	t	e
		
A.W.S. Brown		
L. Loynes		

Mr. Loynes also has the "oddsome" for an uncertain digit in a number. In his book on colour he used , but he now uses or (from circa) e.g. a few years either side of 1166 is 116, the (decimal) nineteenth century is +18.

BOOK REVIEW

'Byraz Colour Co-ordinating', by Louis Loynes, Byraz Colour Bureau, 6, Monmouth St., London, W.C.2., *1173, 8" x X", paper, *EO pp., *13 shillings.

Man has long sought to register Nature logically. As Mr. Velizar Godjevatz did in music, so Mr. Louis Loynes from original experience now exploits a natural twelve-group tendency in colour for his notation. It is precise yet embraces infinitesimal variations in both pigments and spectra.

Briefly, he pigeon-holes all colours in a honeycomb made of two triangular pyramids base to base. Each corner of the triangular layer joining the bases represents a prime colour, Blue (B), Yellow (Y) or Red (R). The upper tetrahedron rises in layers to White or Alb (A) at the tip and the lower descends to Black or Zero (Z). Thus the axis between these tips contains every grey between black and white. The colour-cell in the honeycomb is located by its geometric coordinates from each face, using duodecimal numeration, ideal for the purpose.

Of the many new terms which Mr. Loynes makes up (with clear explanations and origins) some may seem curious; but precise terminology is essential to comprehend colour concepts. An index-glossary would aid reference. Whilst the text is in very clear print, the titling is too varied to distinguish relative importance. Each page is a neat thematic whole; but chapter-grouping would shew up the structure of the work.

Colour notations by others, e.g. Newton, Goethe, Ostwald and Munsell, are objectively considered, and there is an ample bibliography. Two deep-seeking shorter works are included. As with duodecimals, this systematization permits further developments and equally suits specialist or layman. A simple and interesting way is explained to make a useful colour atlas and the Byraz Colour Bureau offers its facilities and co-operation.

Anyone, whatever the interest in colours, should read this product of much thought and research. We welcome this author and his book to our Society.

I N D E X T O DUODECIMAL NEWSCASTS 1173, Year 1

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J. Halcro Johnston The Reverse Notation	4;0 s.
Jean Essig La duodecimalité: chimère ou vérité future (in French)	6;0 s.
Douze notre dix futur (in French)	13;0 s.
Heinrich Teitze Gelöste und Ungelöste Mathematische Probleme (in German)	30;0 s.