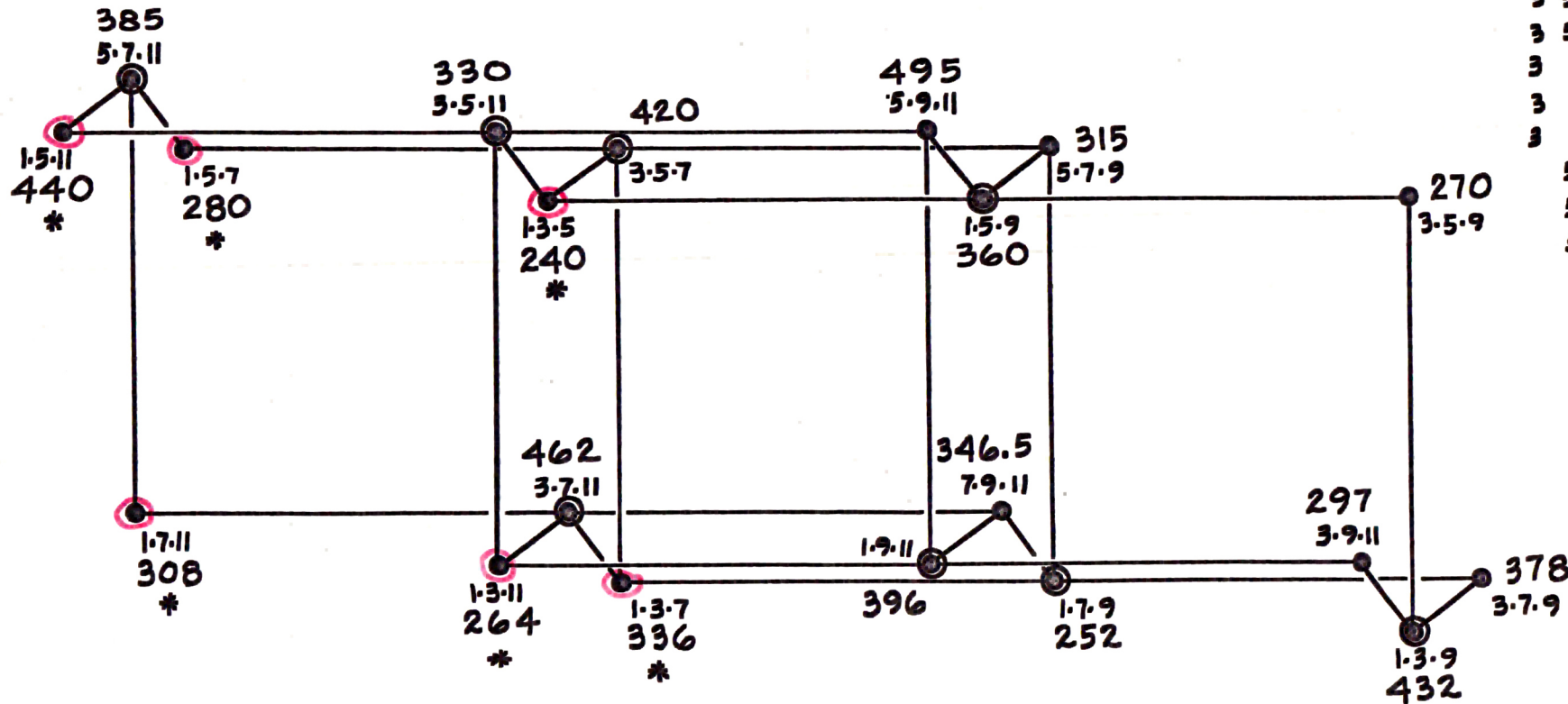


THE EIKOSANY

SHOWN AS A BASIS FOR PITCH TABLES

ISSUED BY ERV WILSON 23 JUNE 1967

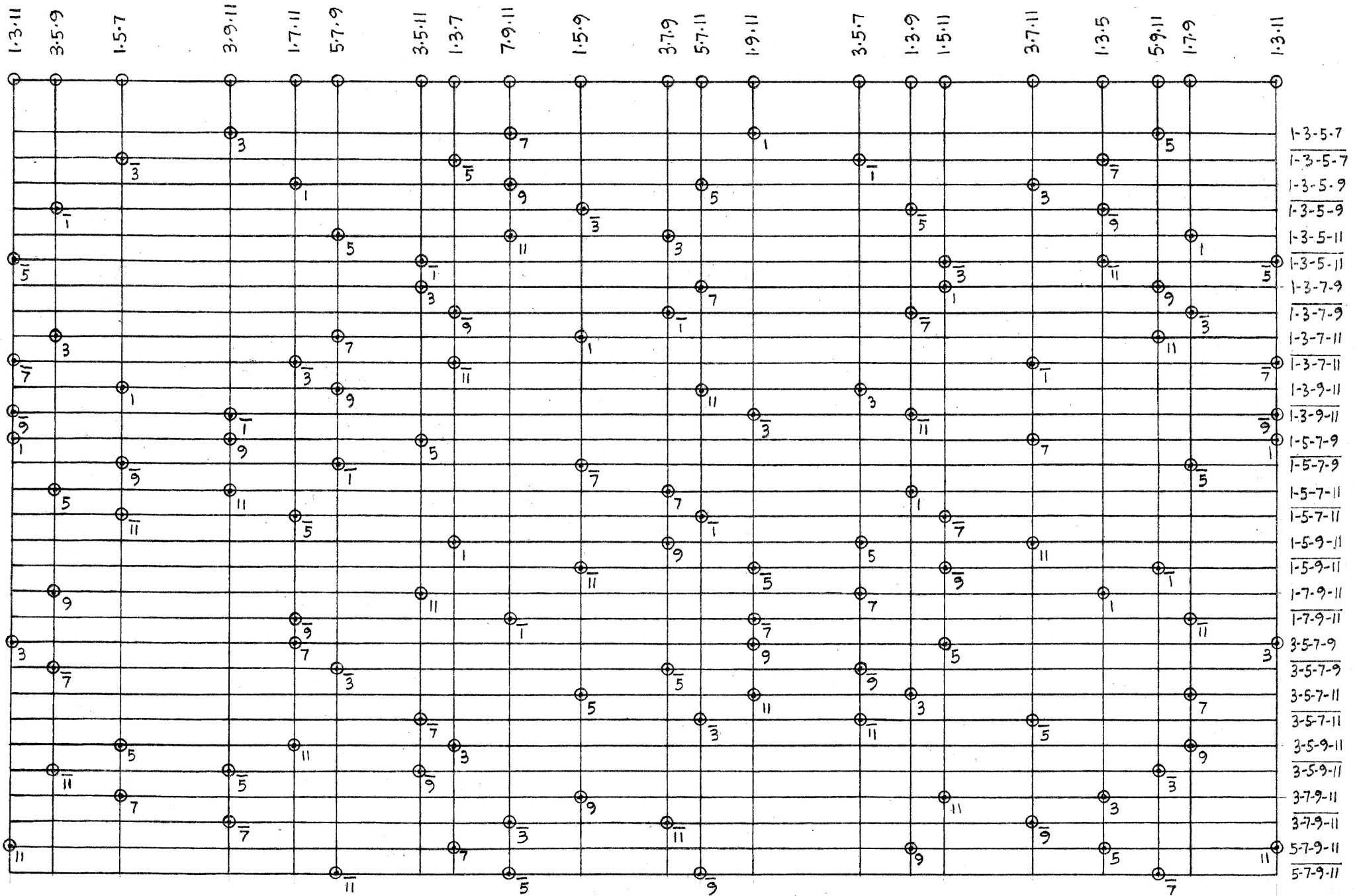


1	3	5	7	9	11
1	3	5			
1	3		7		
1	3			9	
1	3				11
1		5	7		
1		5		9	
1		5			11
1			7	9	
1			7		11
1				9	11
3	5	7			
3	5		9		
3	5				11
3		7	9		
3		7			11
3			9		11
	5	7	9		
	5	7			11
	5		9		11
		7	9		11

⊙ = DOUBLE LINKAGE MEMBERS OF EIKOSANY, PROPOSED SET OF PITCH TABLES.

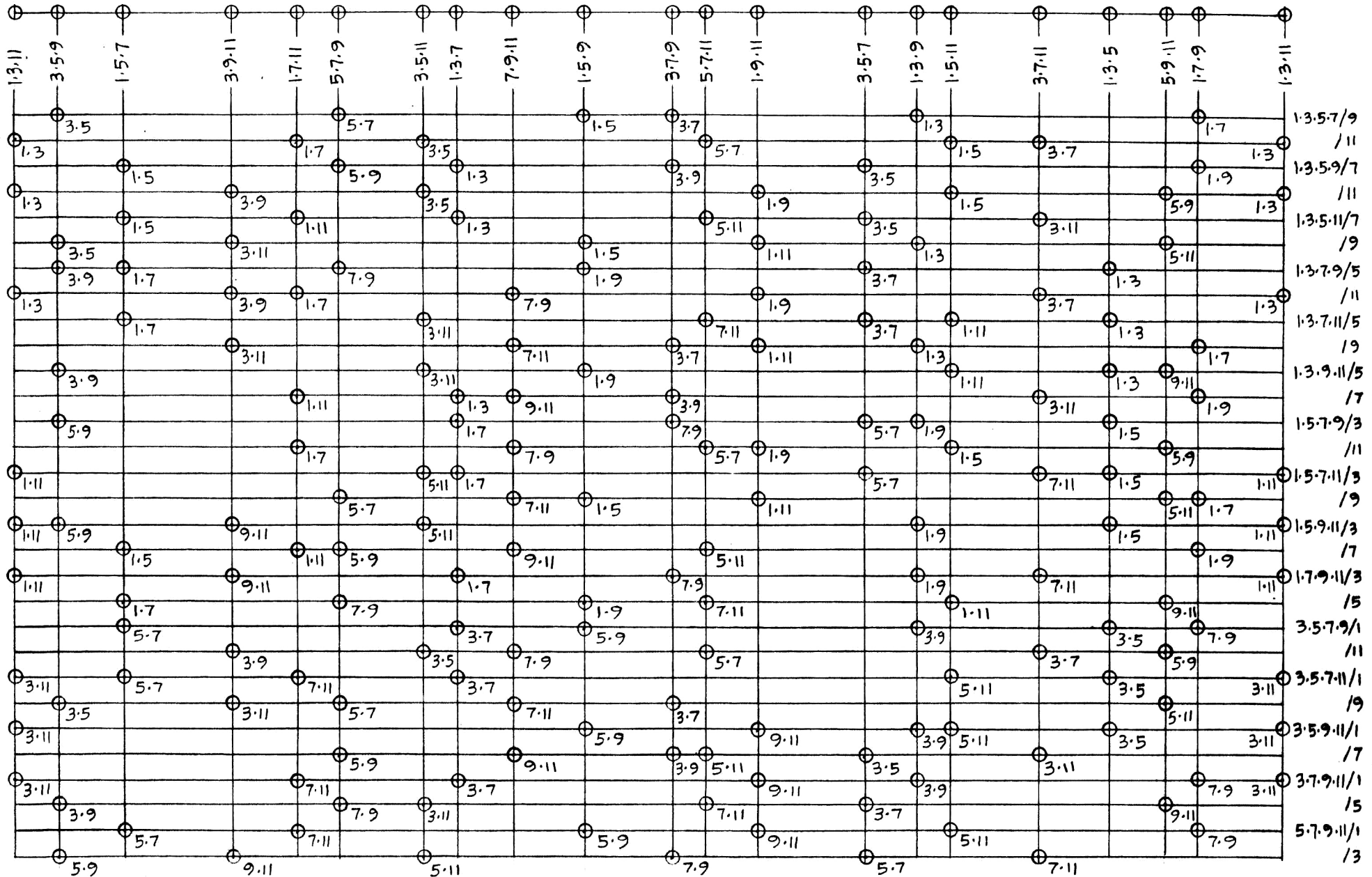
* = MEMBERS OF 3.5.7.11 HEXANY ALTERNATE OR COMPLEMENTARY SET.

ISSUED BY ERV WILSON
 JUNE 1969



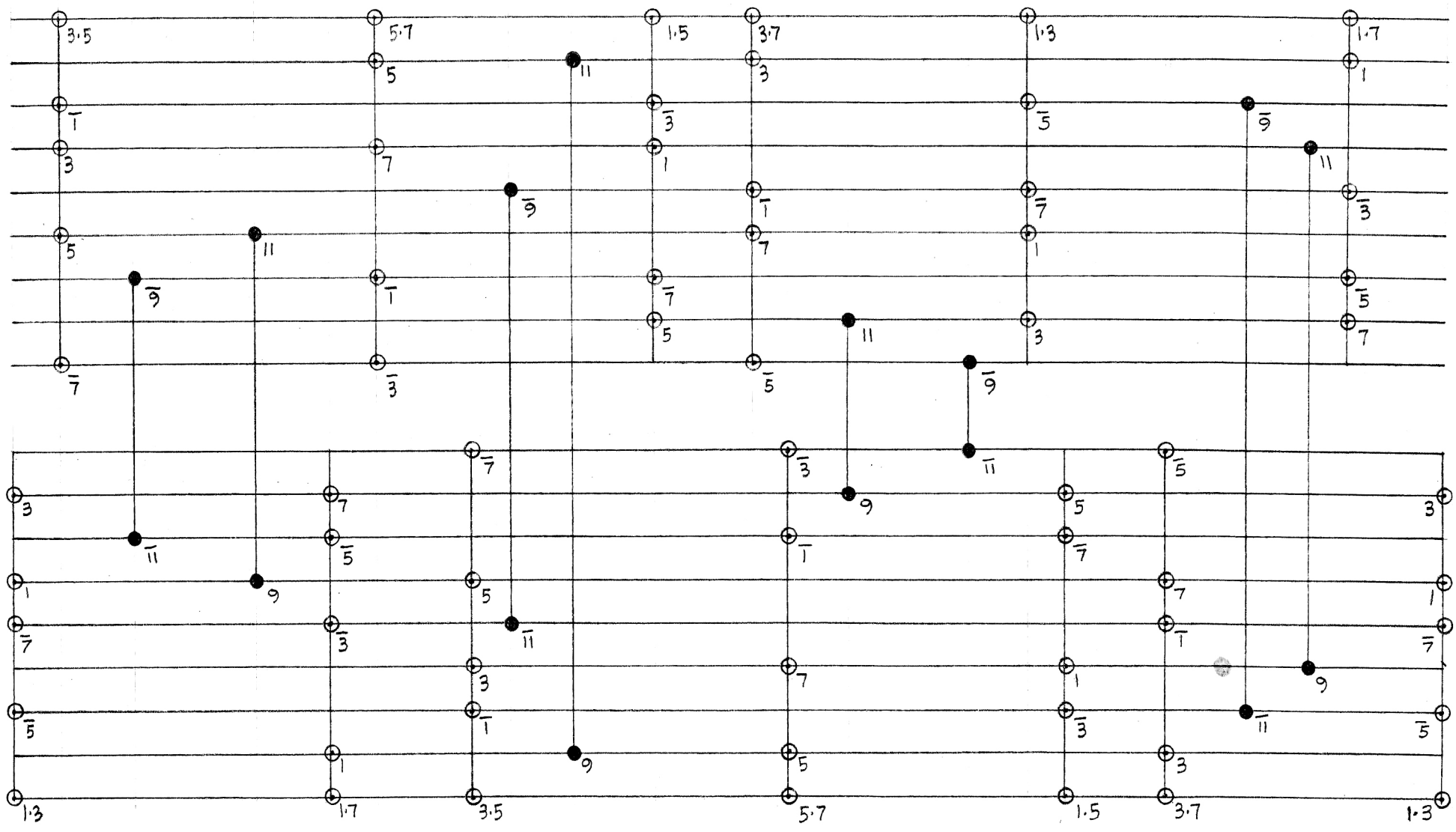
Tetrads of the 1-3-5-7-9-11 Eikosany

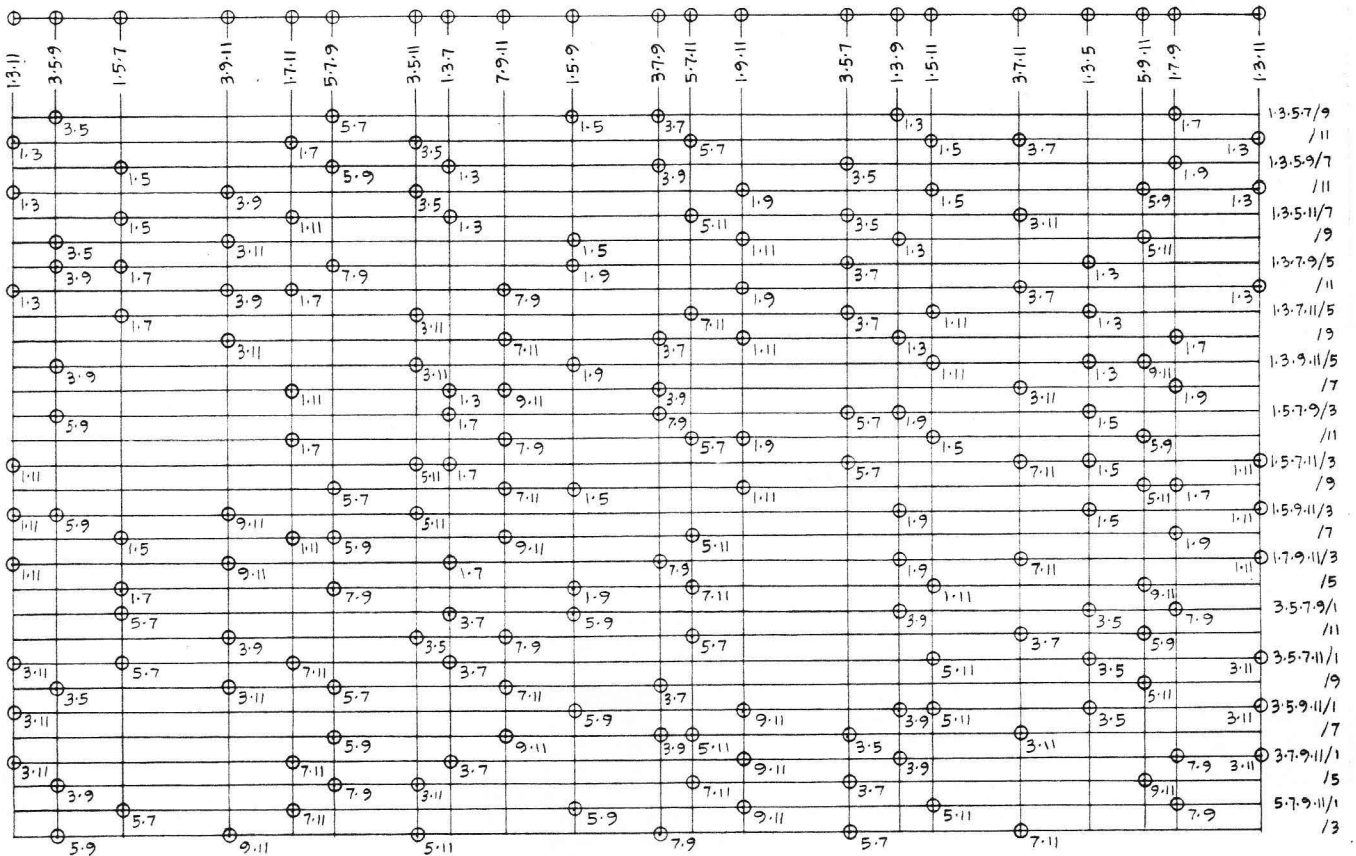
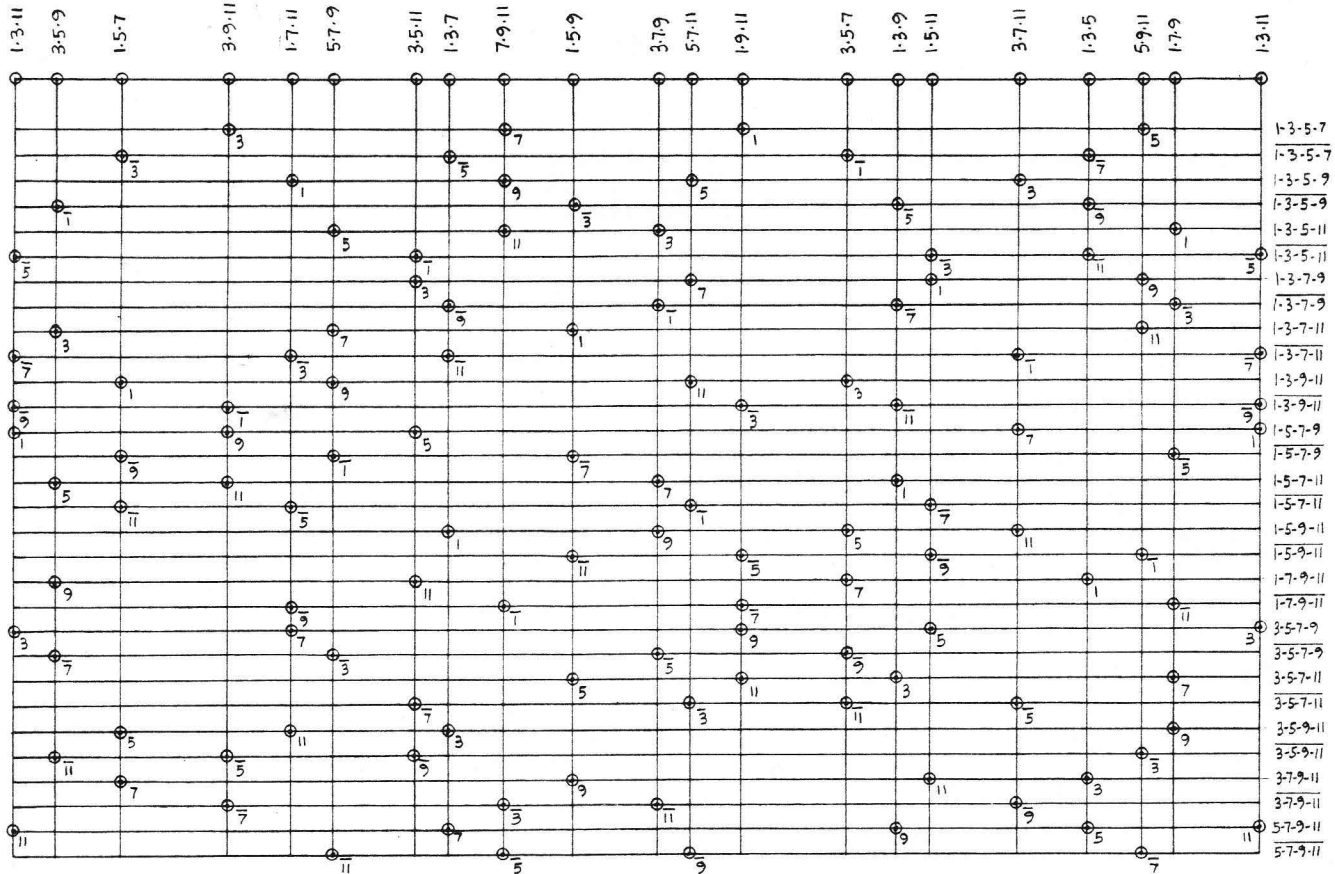
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 JULY 1969



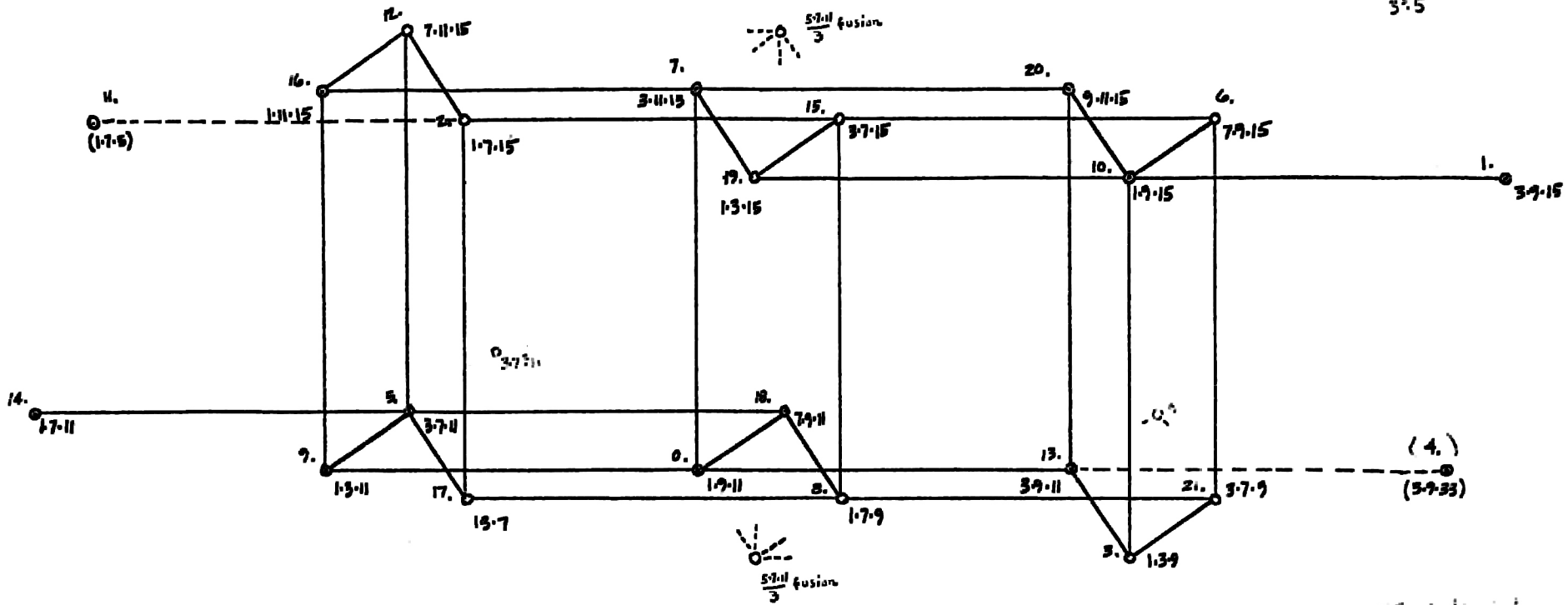
Hexanies of the 1-3-5-7-9-11 Eikosany

1.3.11 3.5.9 1.5.7 3.9.11 1.7.11 5.7.9 3.5.11 1.3.7 7.9.11 1.5.9 3.7.9 5.7.11 1.9.11 3.5.7 1.3.9 1.5.11 3.7.11 1.3.5 5.9.11 1.7.9 1.3.11



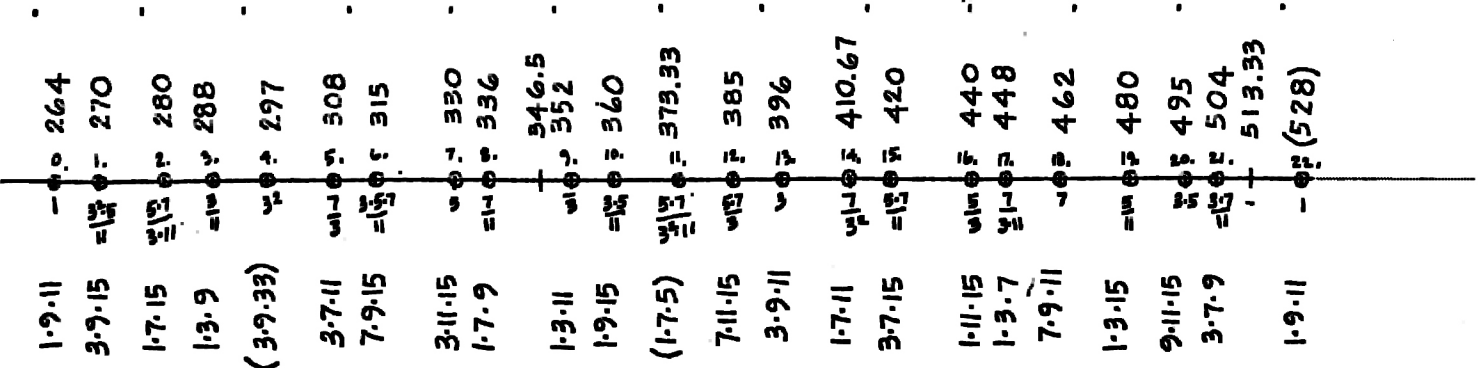


$$\frac{7^{\circ}.11}{3^{\circ}.5} =$$



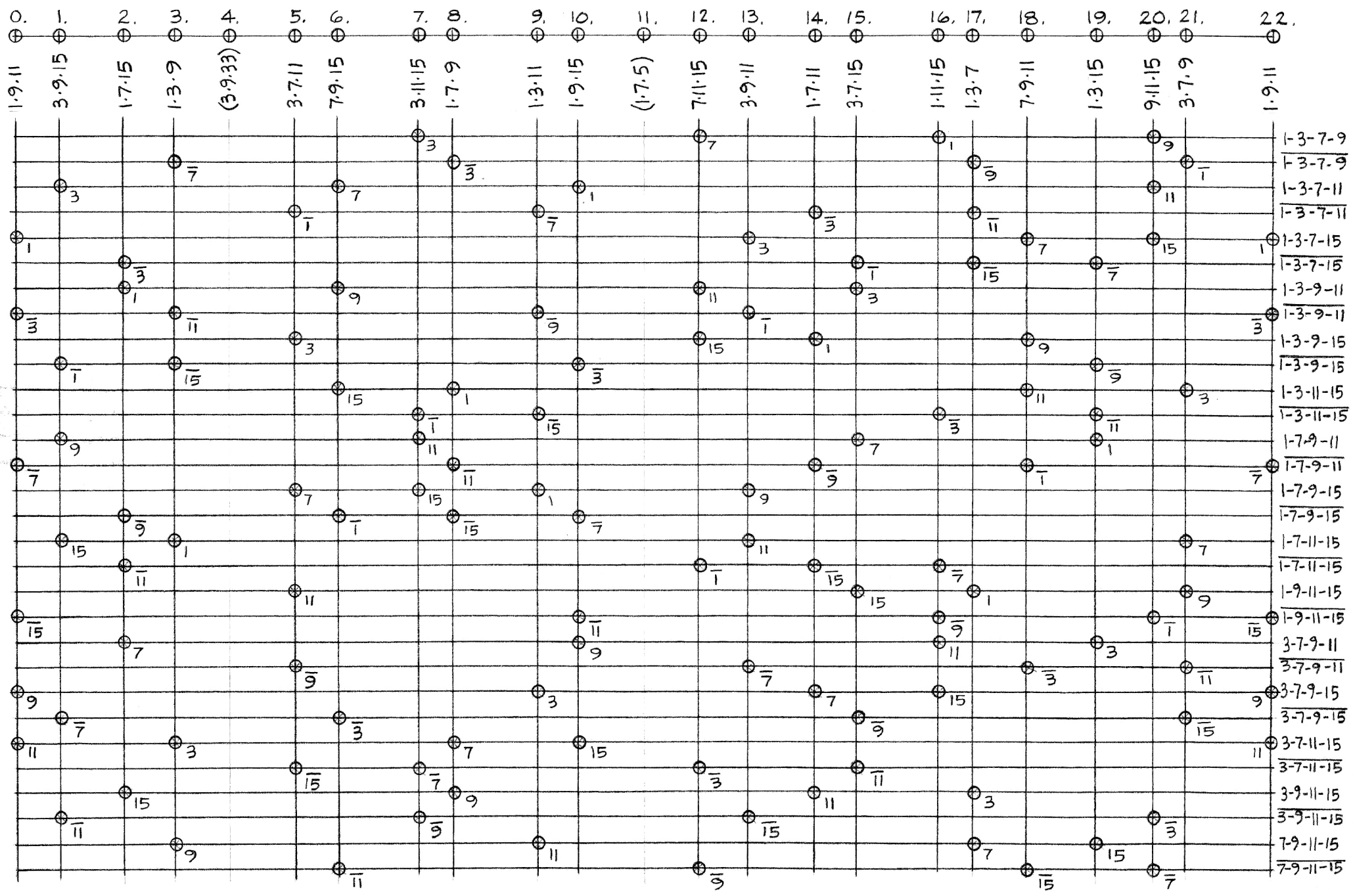
12 Articulate

- 4 = 3-9-33
- 11 = 1-7-15

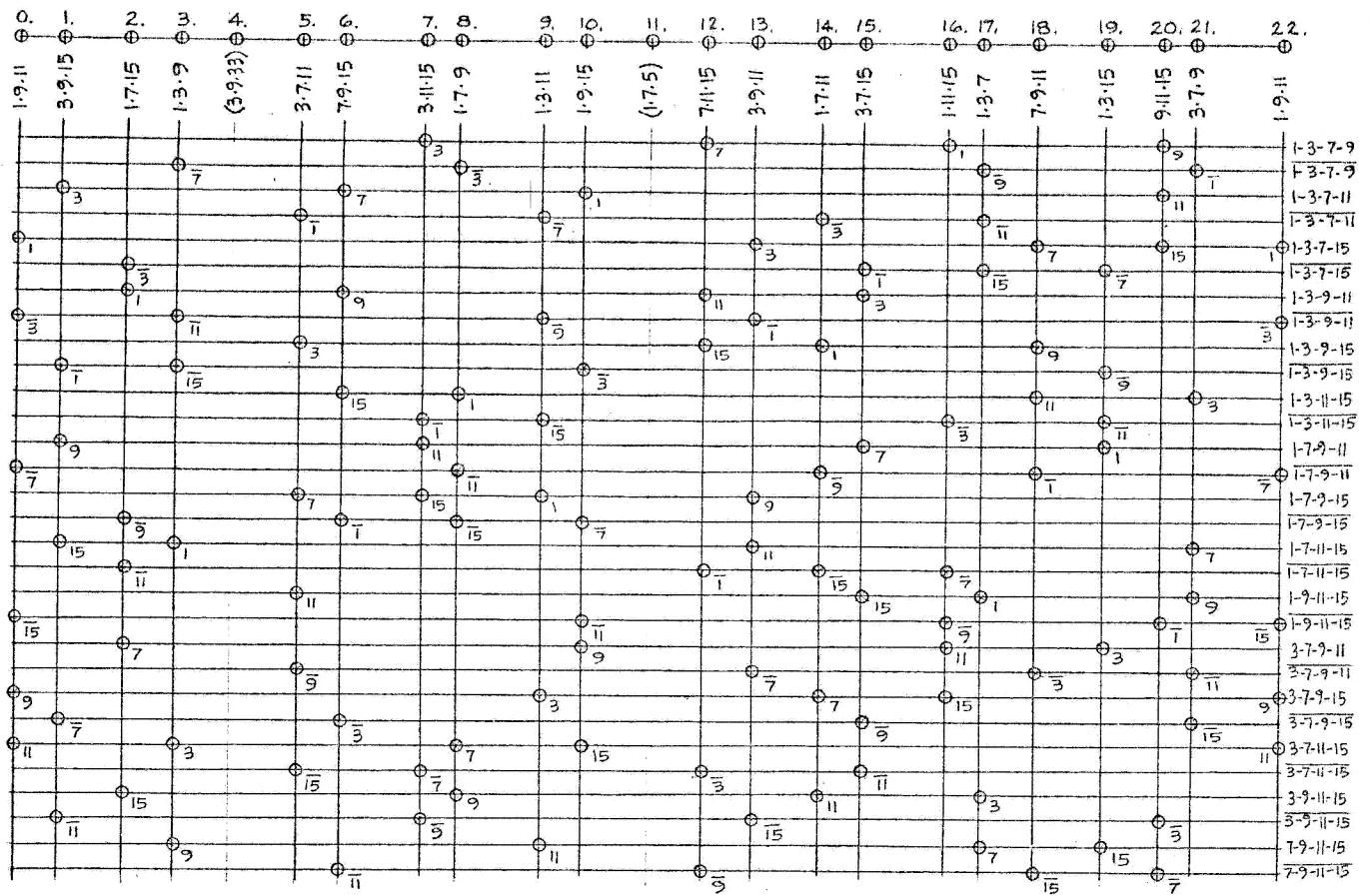


Pre-issue by Ern Wilson Aug 1968
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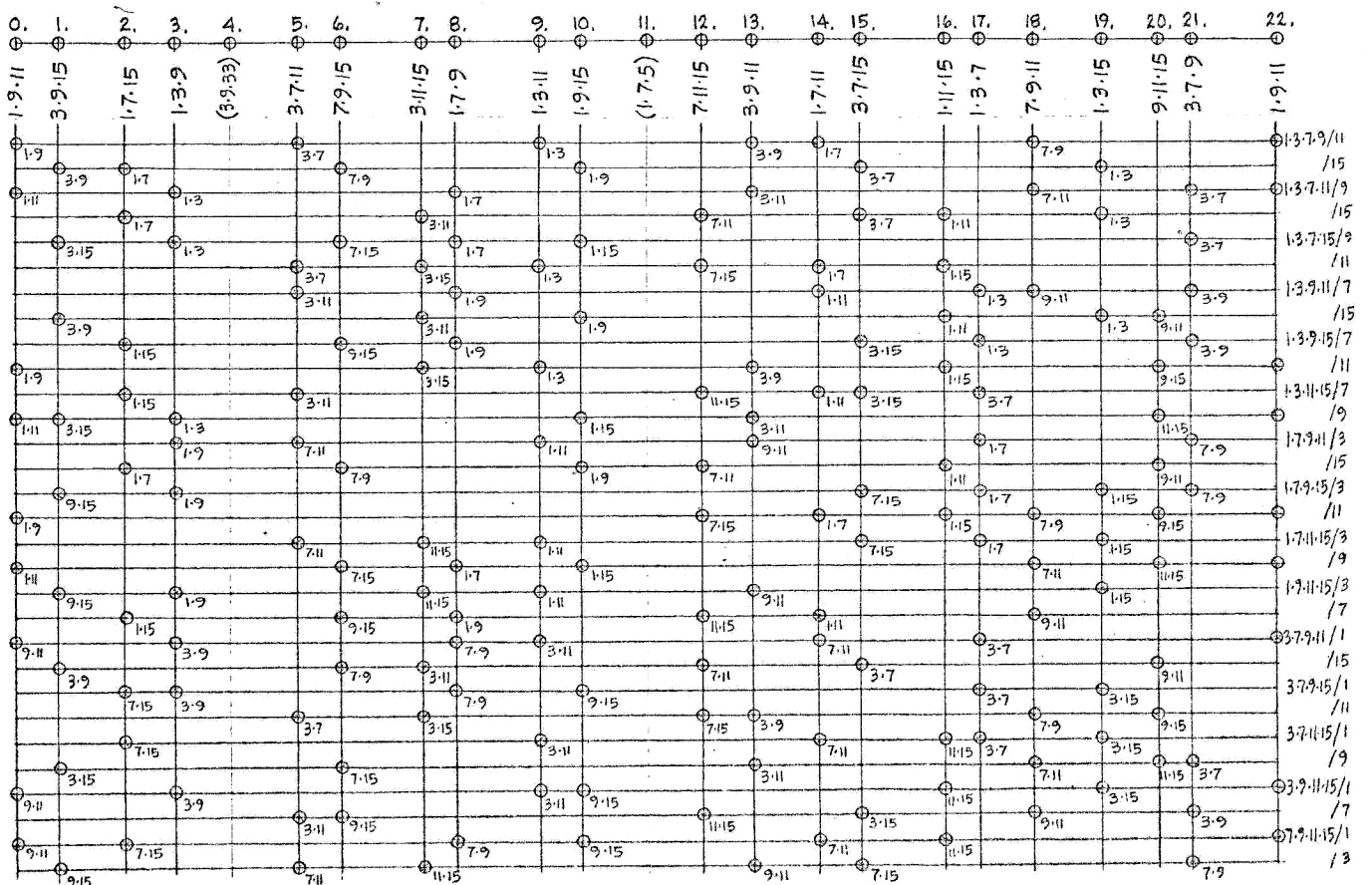
1 3 7 9 11 15
EIKOSANY



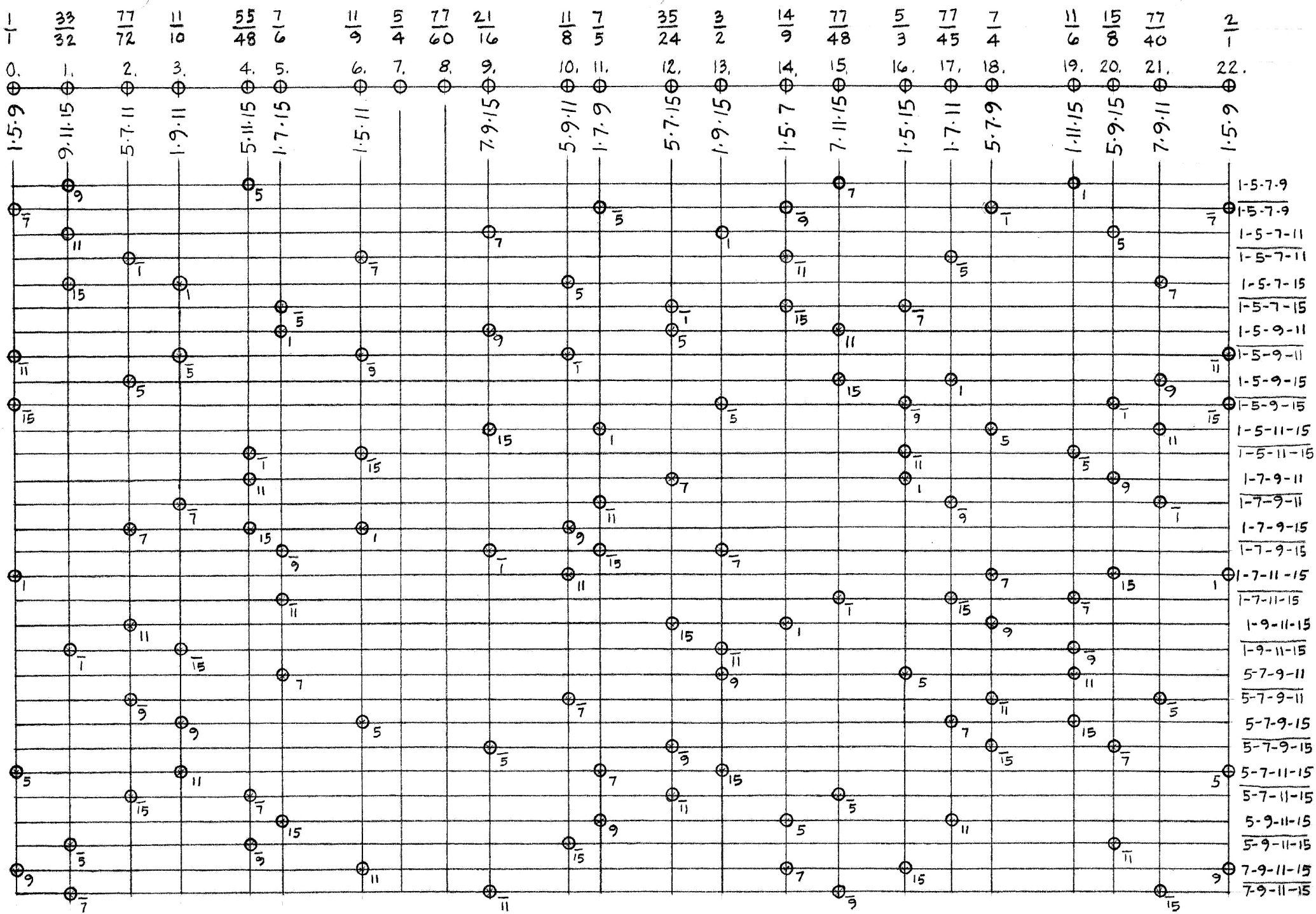
Tetrads of 1-3-7-9-11-15 Eikosany
 Issued by Ervin M. Wilson 1968



Tetrads of 1-3-7-9-11-15 Eikosany
 Issued by Ervin M. Wilson 1968

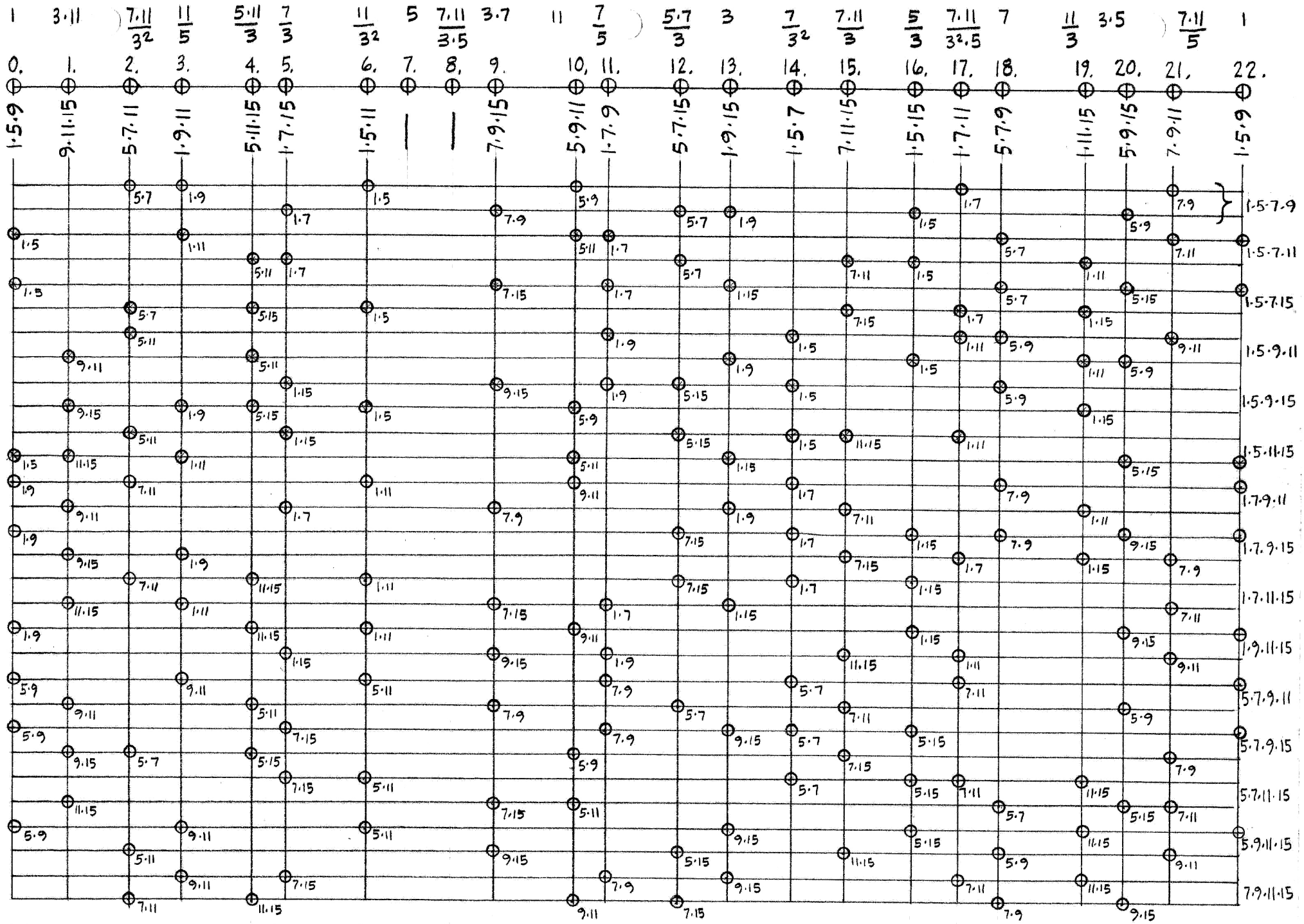


Hexanys of the 1-3-7-9-11-15 Eikosany
 Issued by Ervin M. Wilson 1968



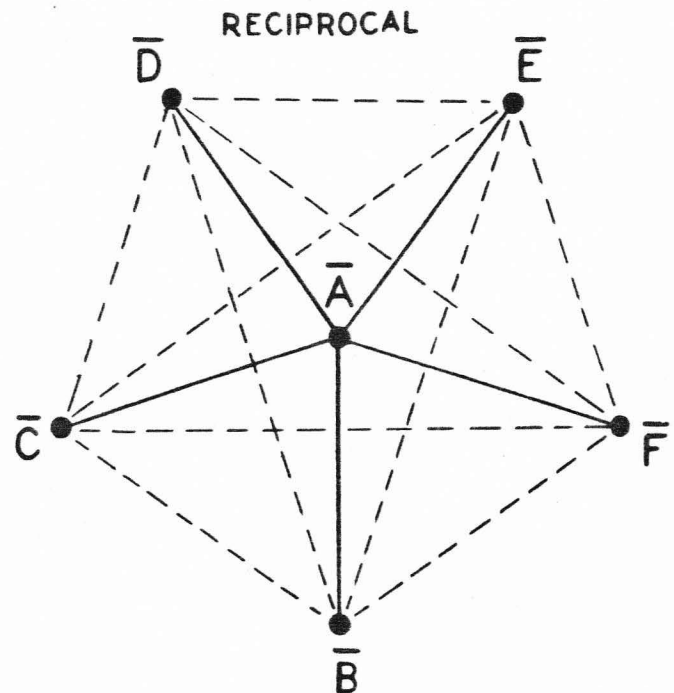
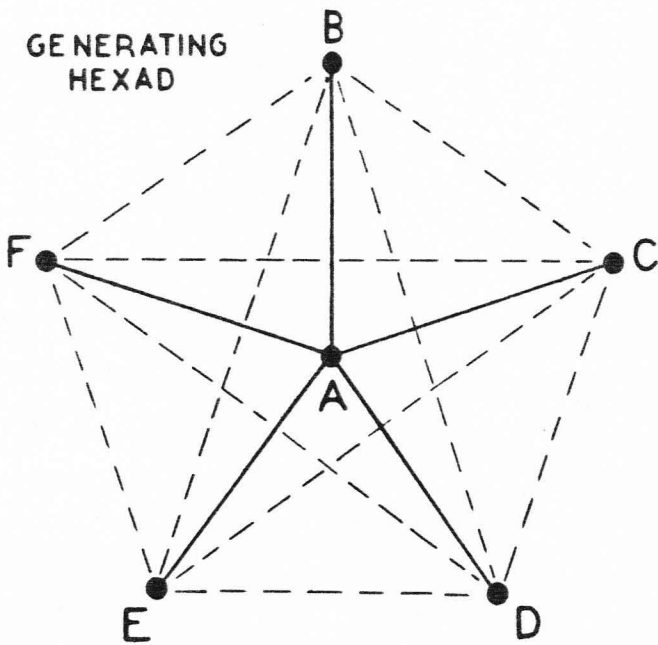
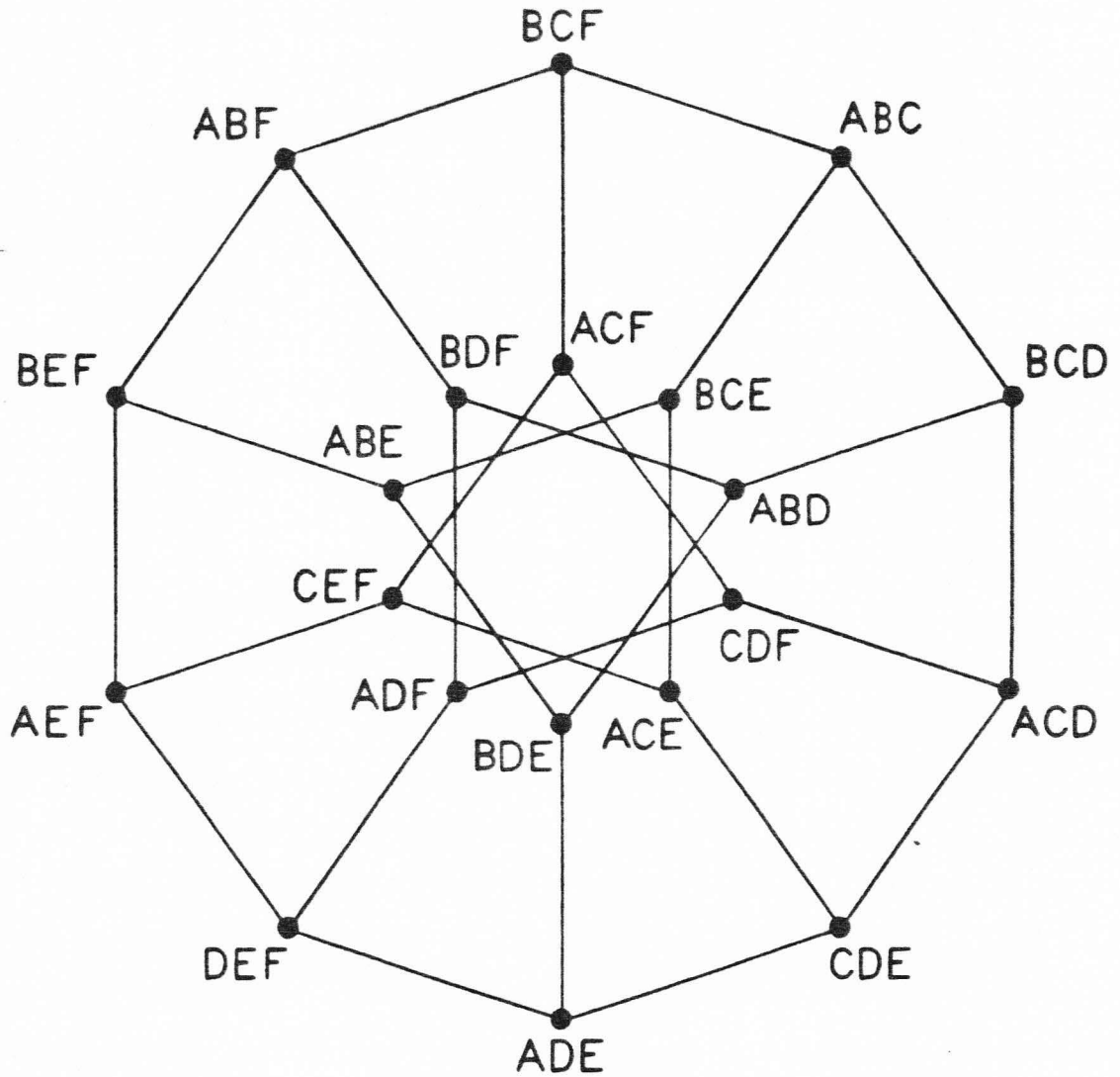
TETRADIC CELLS OF THE 1-5-7-9-11-15 EIKOSANY

Issued by Ervin 14 JAN 68



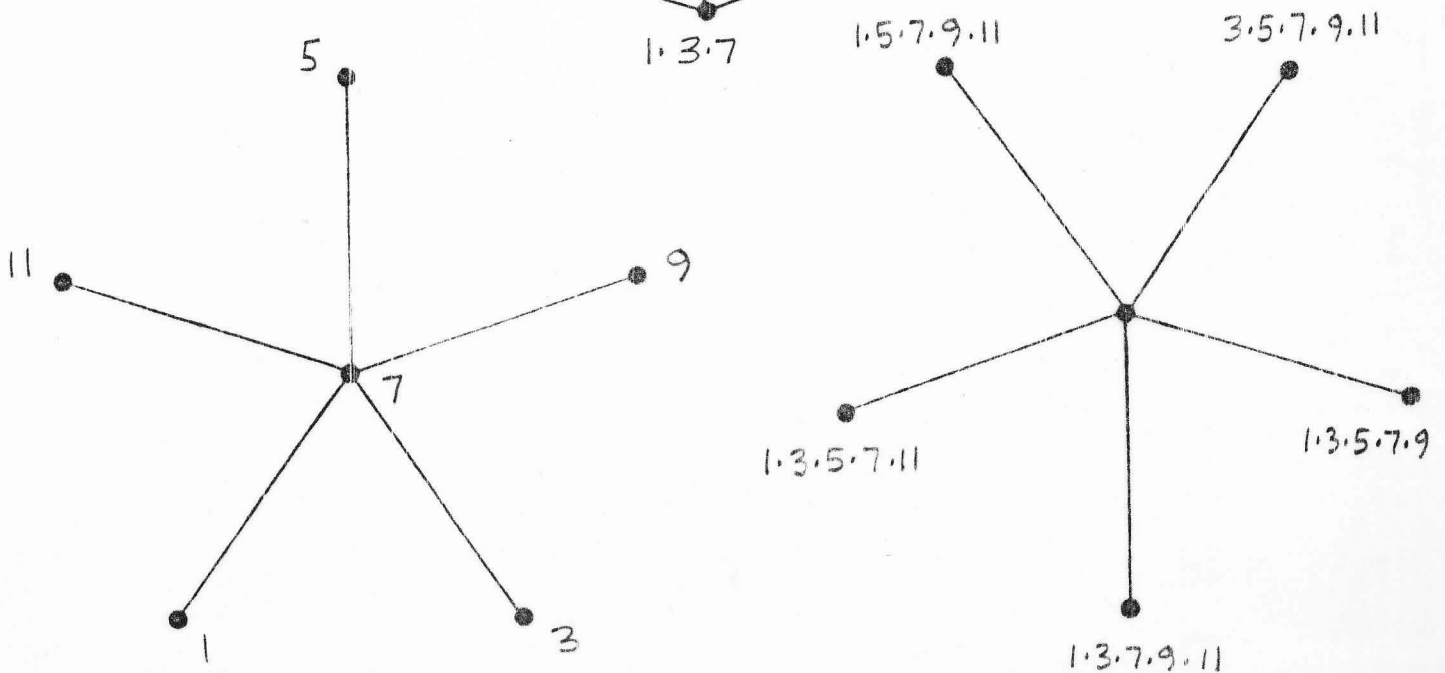
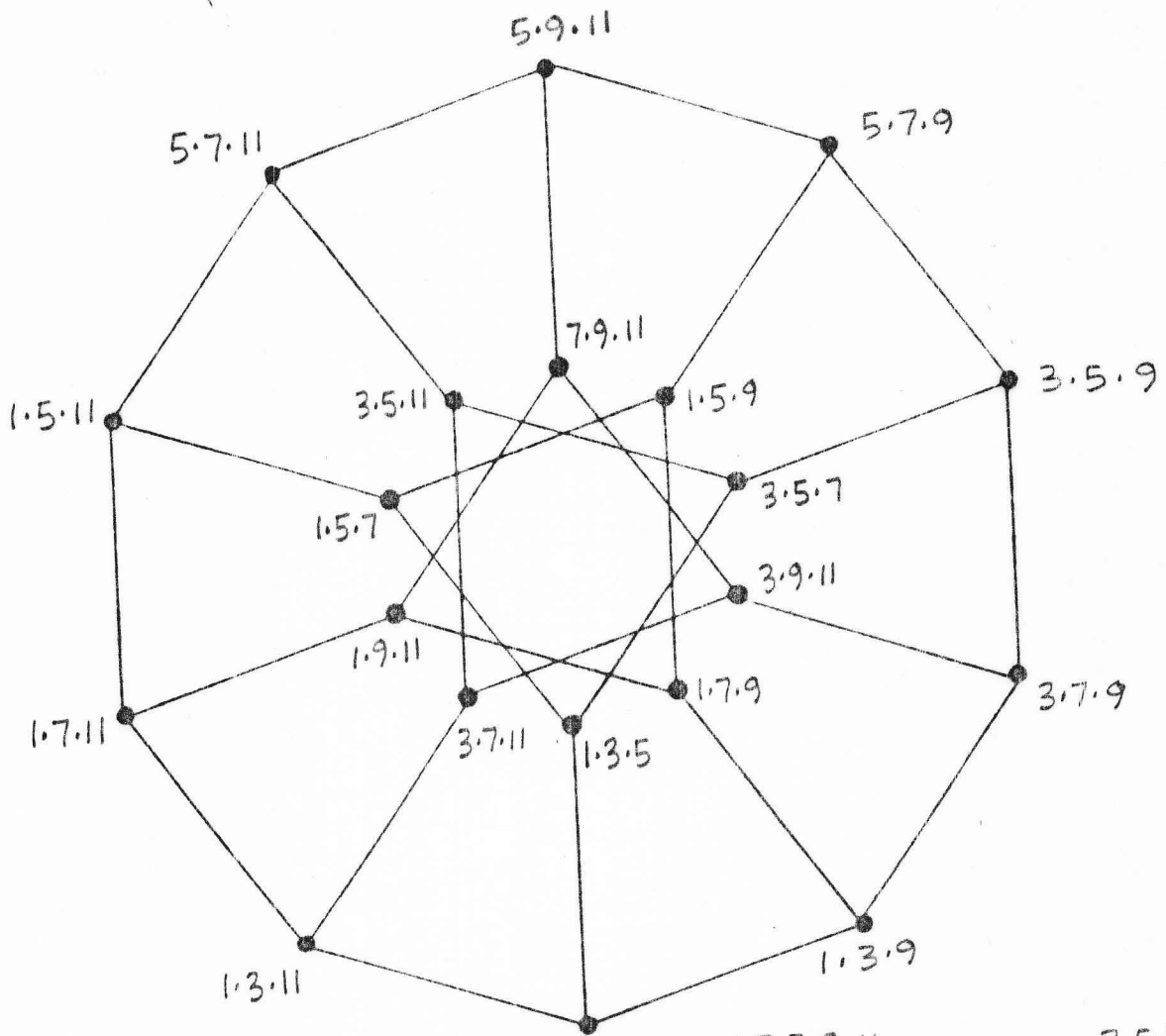
Hexany of the 1-5-7-9-11-15 Eikosany
 Issued By Erv Wilson Dec 67

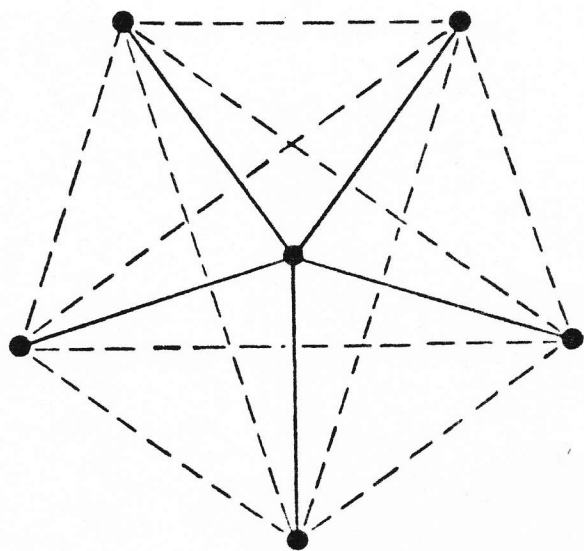
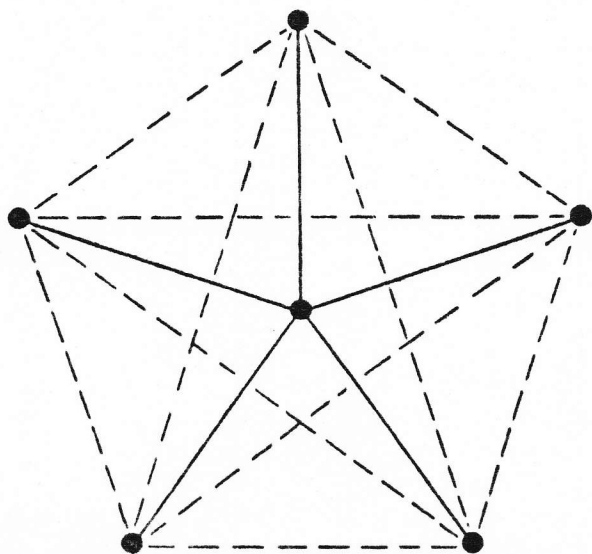
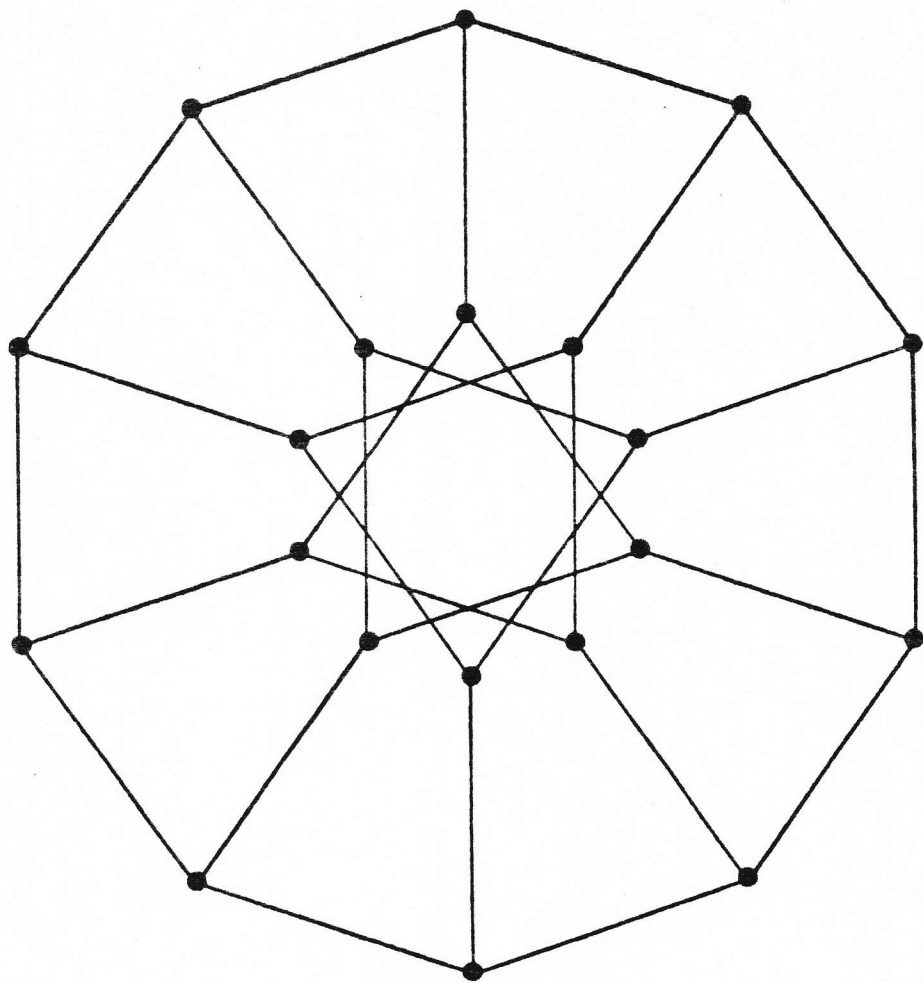
A B C D E F EIKOSANY

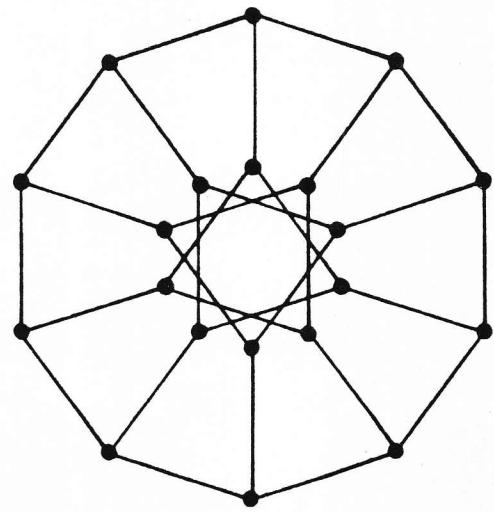
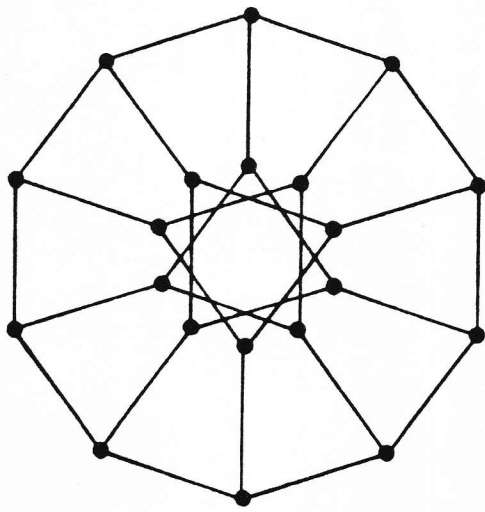
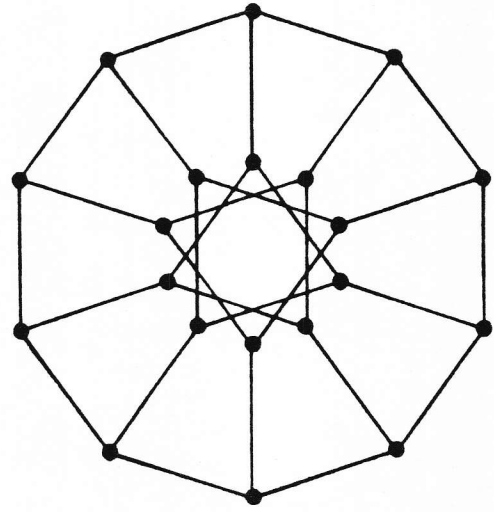
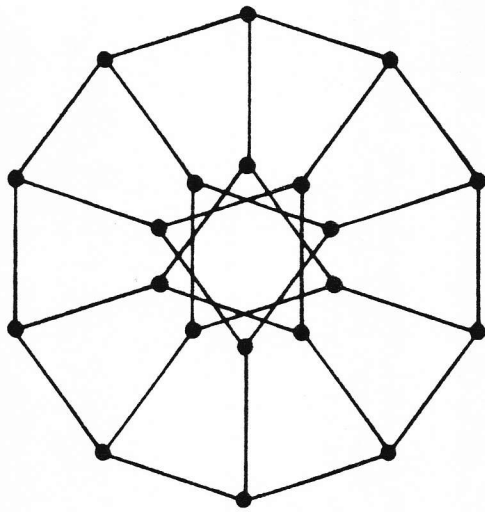
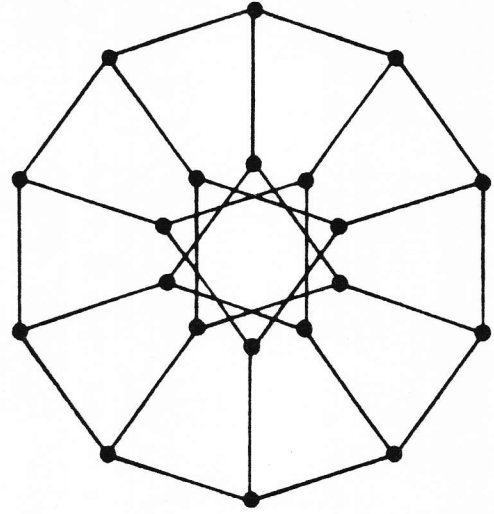
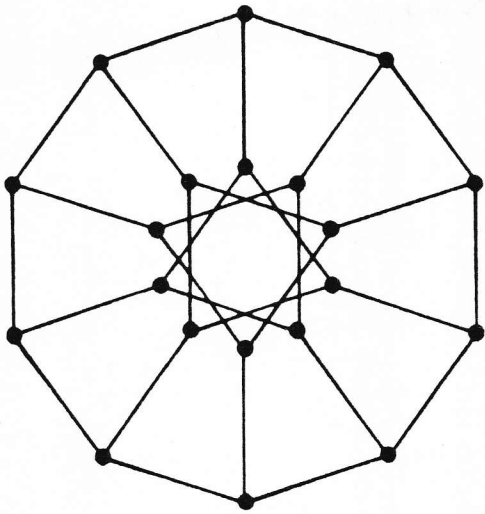


$\binom{1}{6}, \binom{3}{6}, \& \binom{5}{6}$ 1.3.5.7.9.11 Sets

© 1979 by Erv Wilson

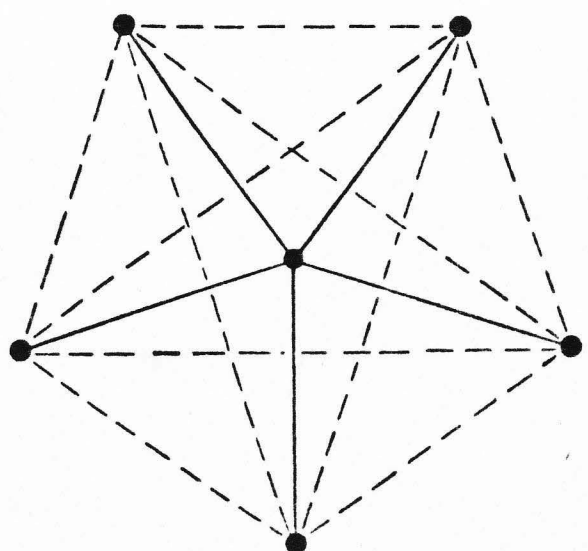
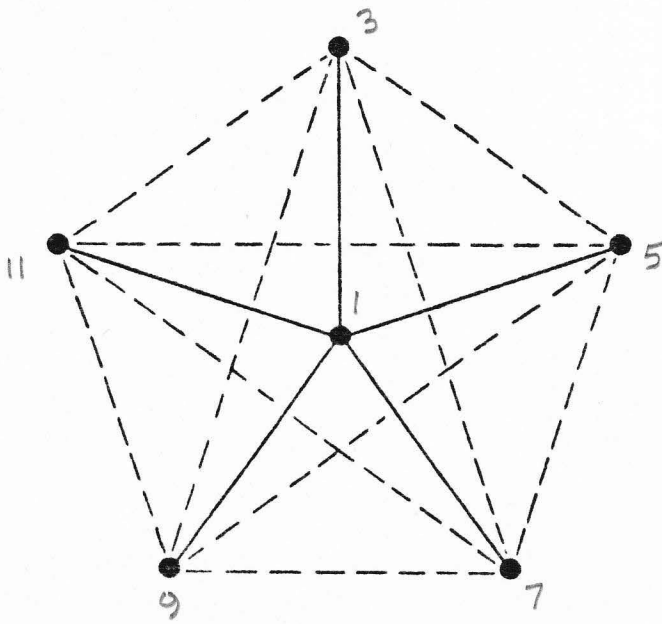
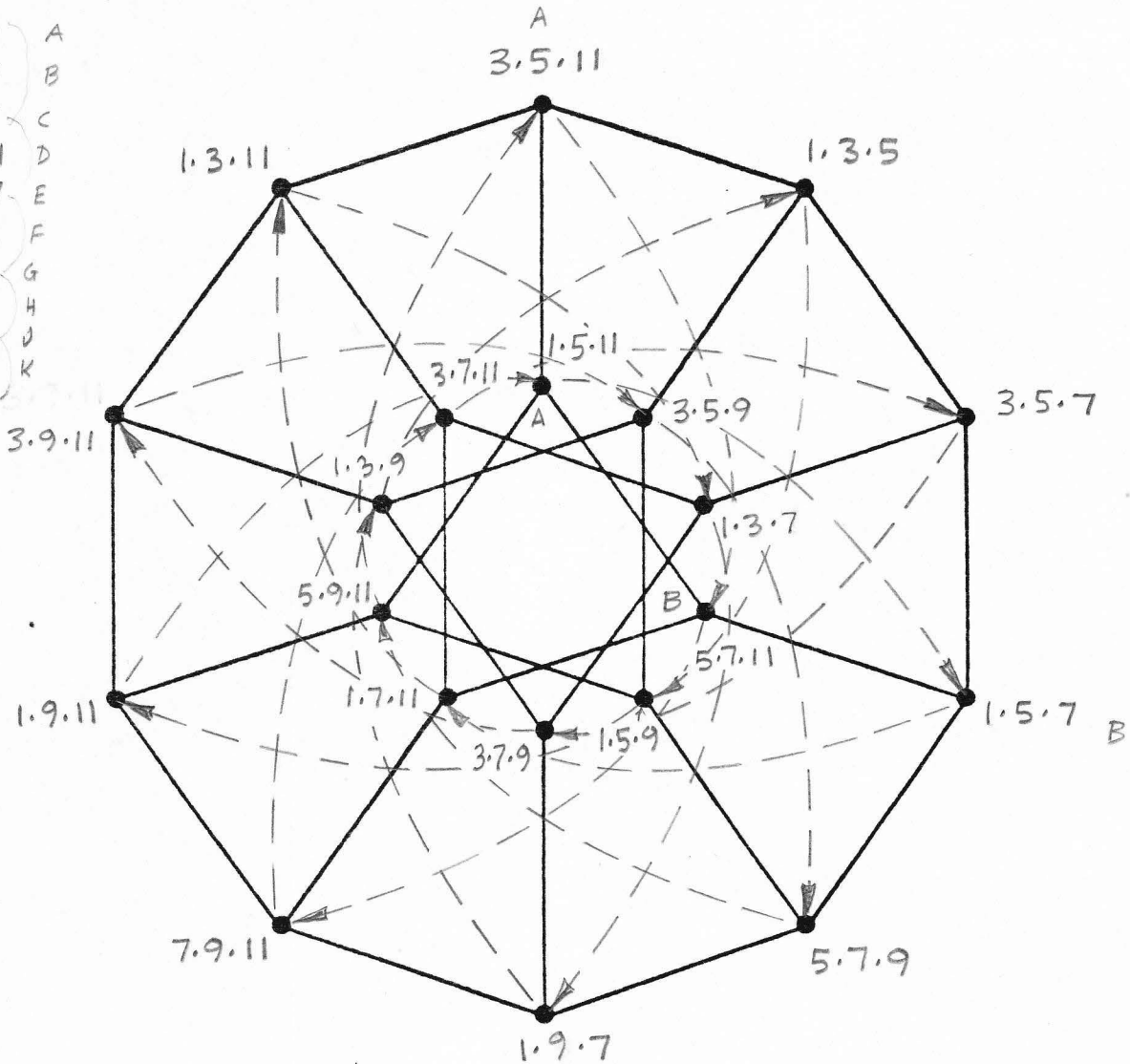


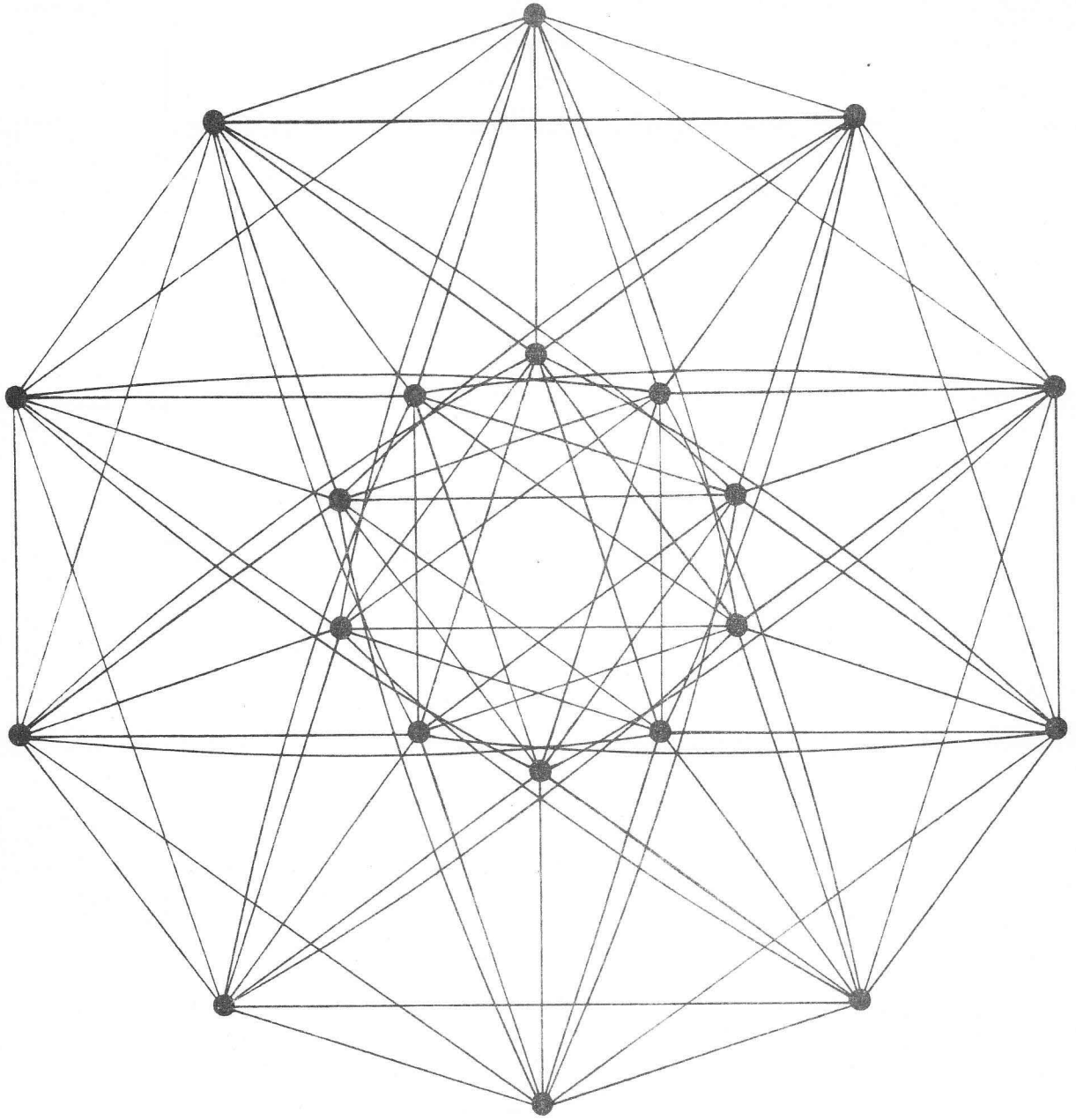




Paired Cycle

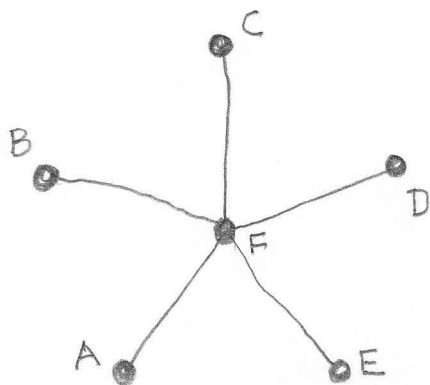
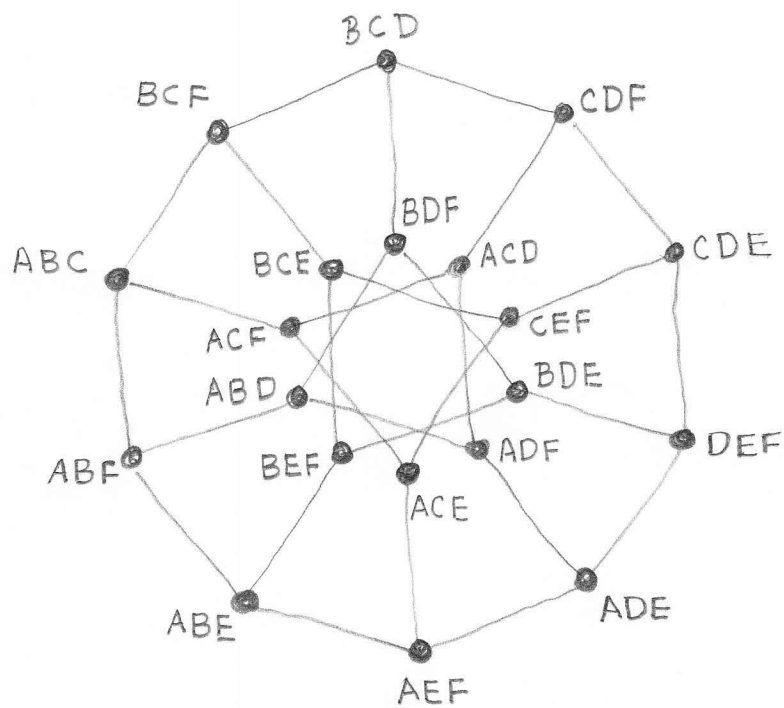
- 3.5.11 — 1.5.11 A
- 5.7.11 — 1.5.7 B
- 7.9.11 — 1.7.11 C
- 3.7.11 — 1.3.11 D
- 3.5.7 — 1.3.7 E
- 3.7.9 — 1.9.7 F
- 3.9.11 — 1.3.9 G
- 3.5.9 — 1.3.5 H
- 5.7.9 — 1.5.9 J
- 5.9.11 — 1.9.11 K
- (1.5.11)

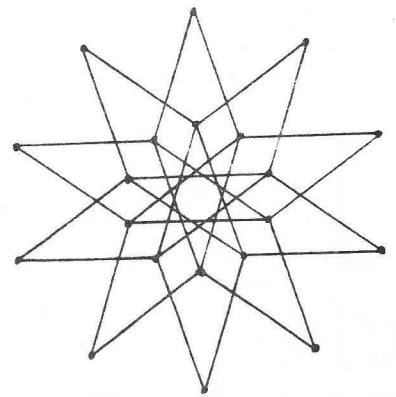
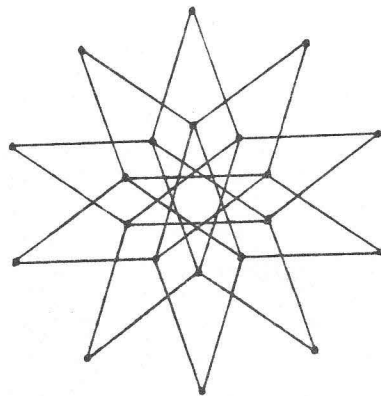
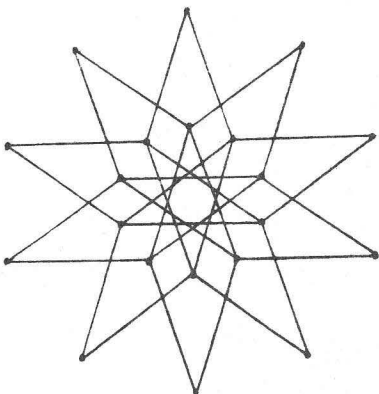
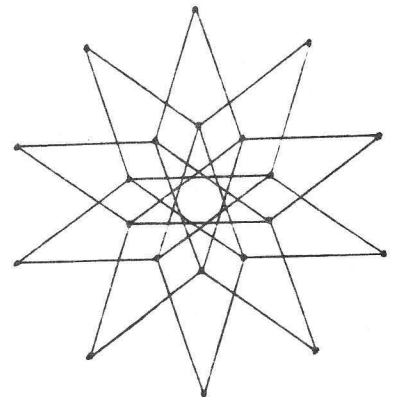
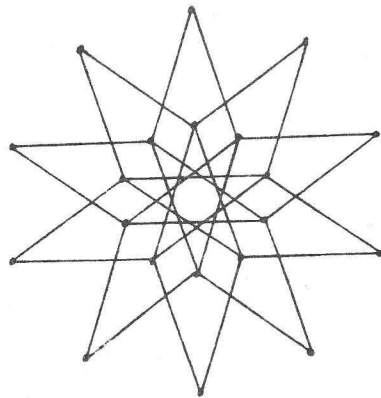
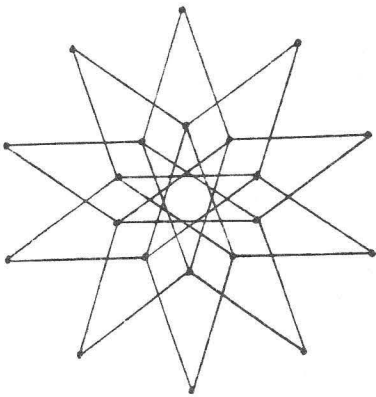
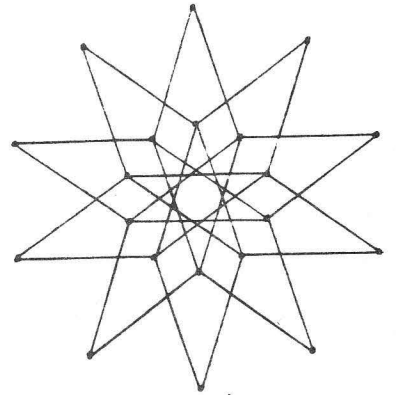
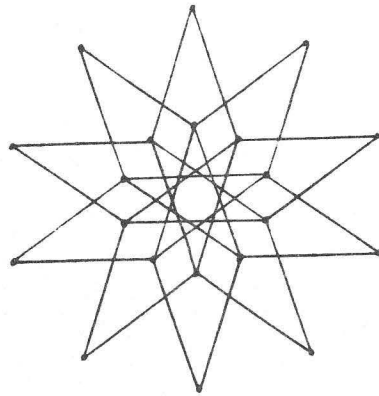
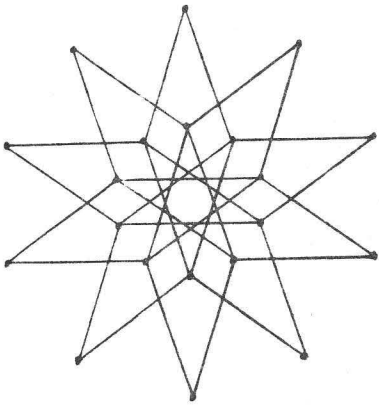
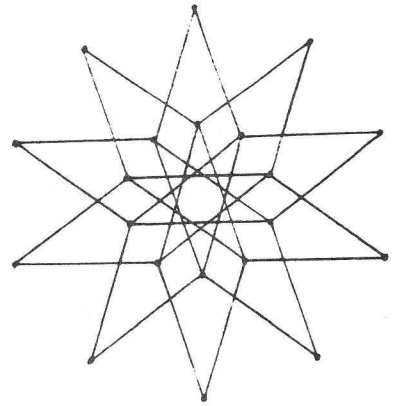
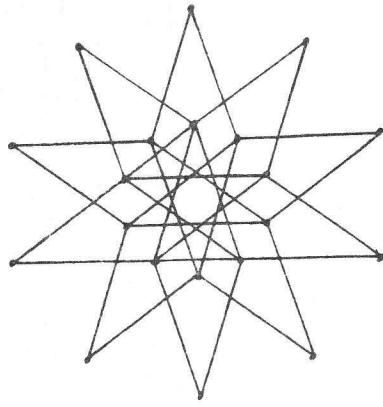
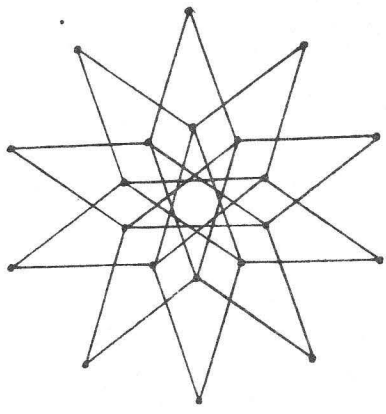




EIKOSANY

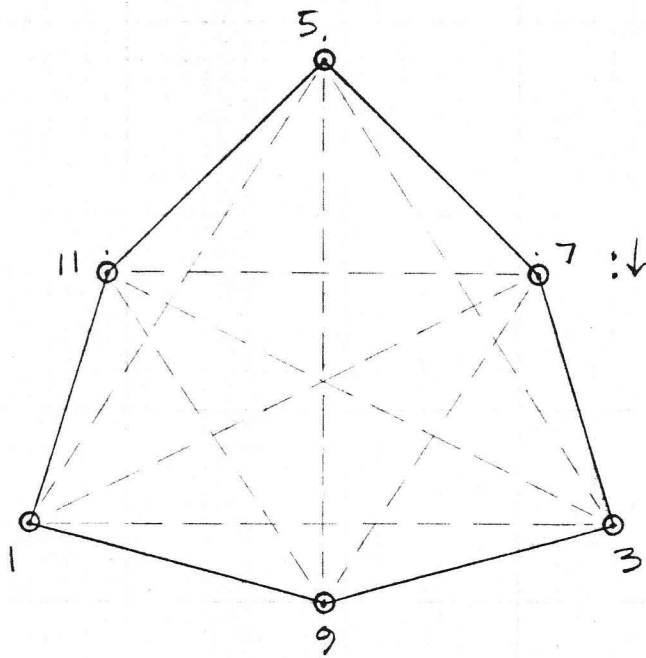
Issued by Erv Wilson, 1969





Erin Wilson 1969

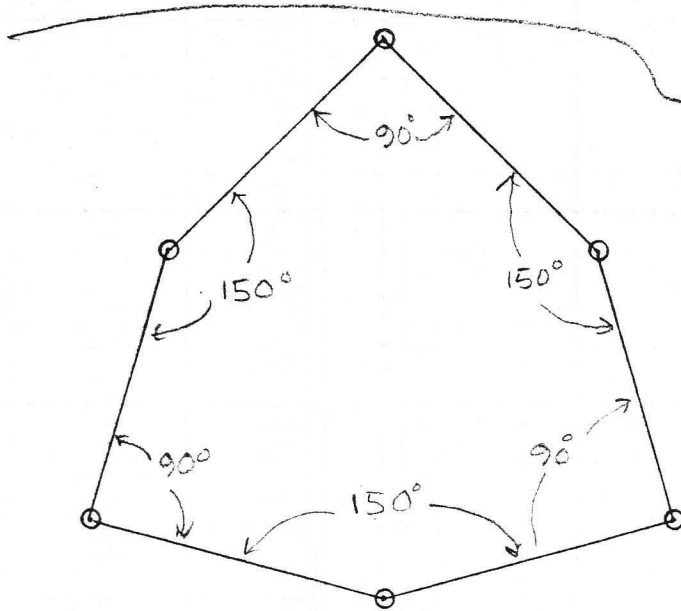
Construction of Eikosany



This is the shape I actually use for the hexad. The top 3 points are displaced downward a unit as shown, creating a slight but useful distortion.

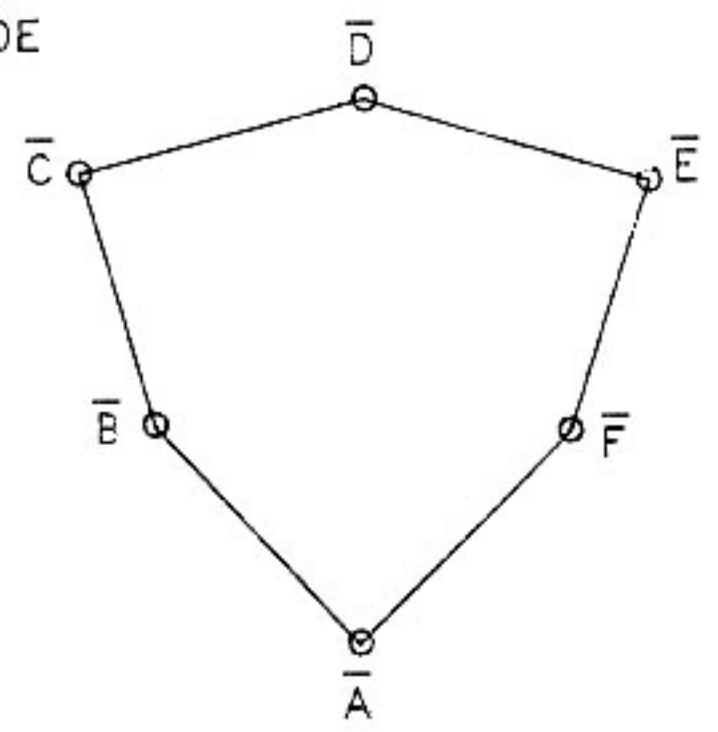
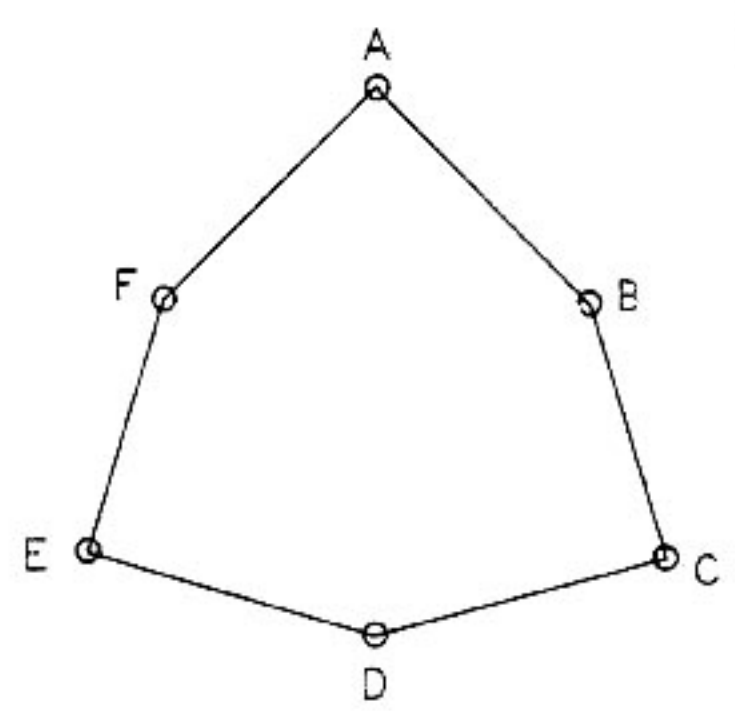
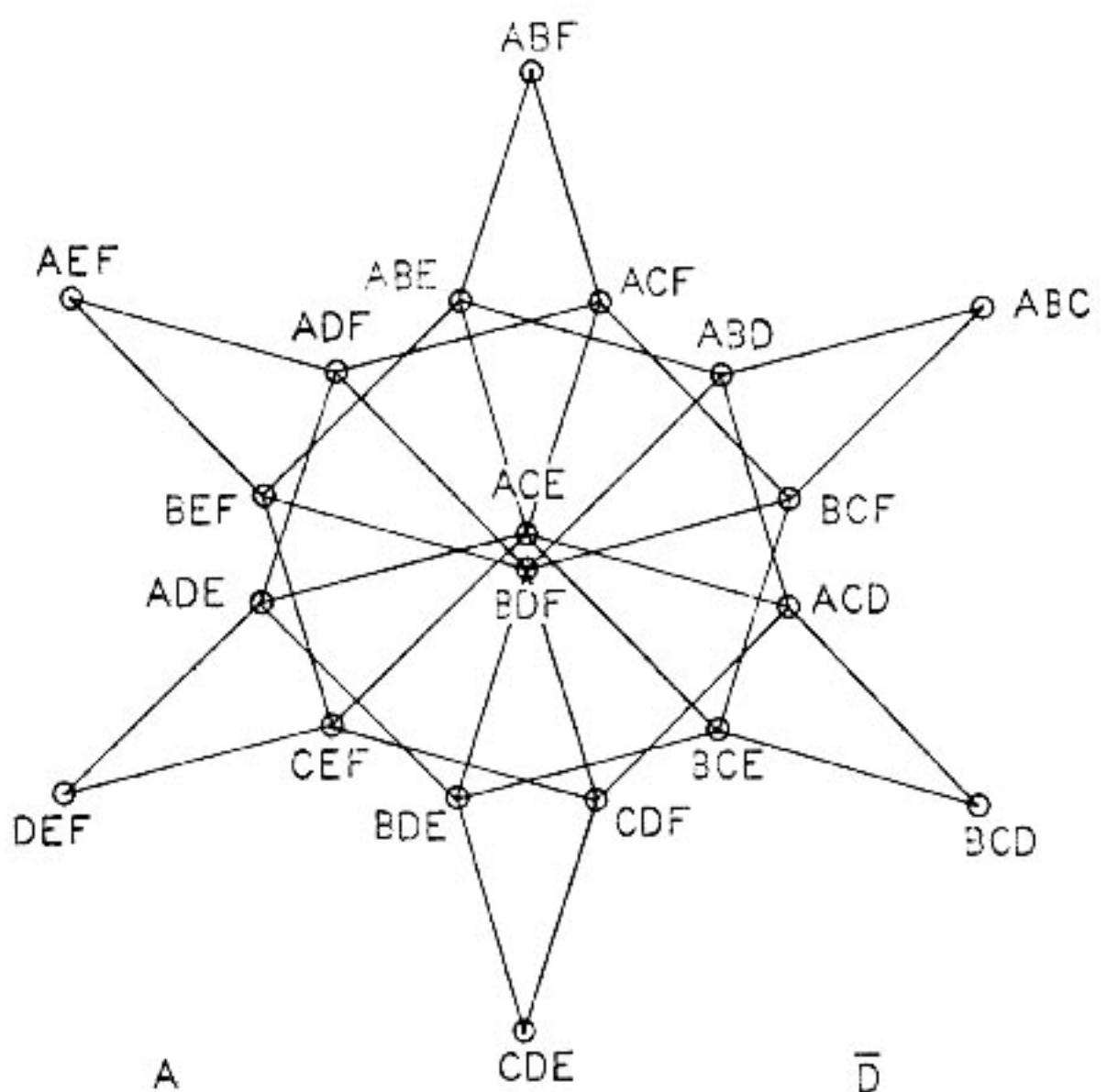
The elements are assigned to the 6 points in any one of a variety of permutations. The "Combination-product-set-series" is then extrapolated in strict geometric process. See attached sheets.

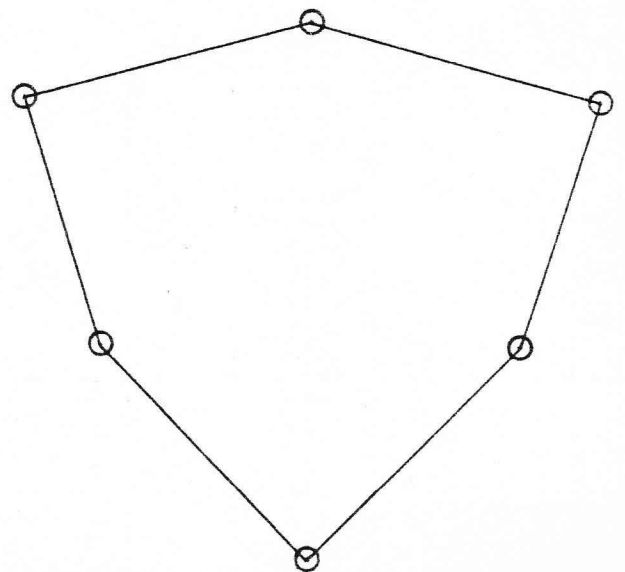
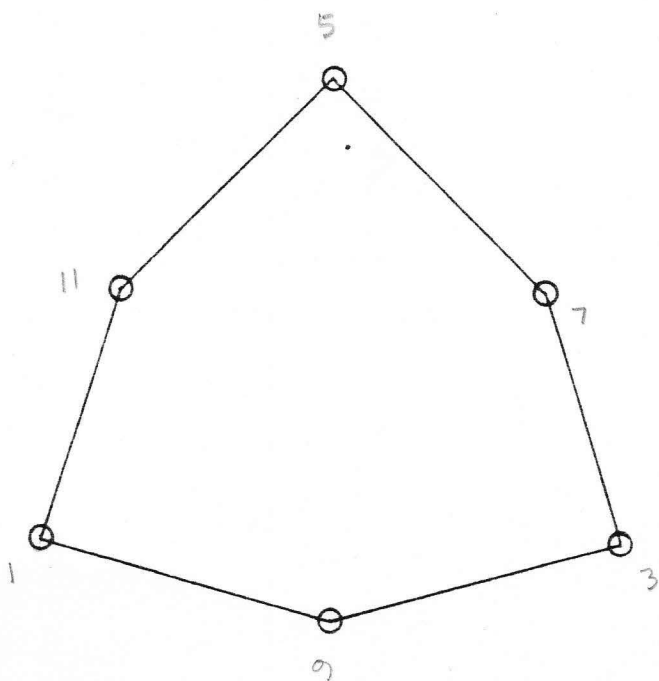
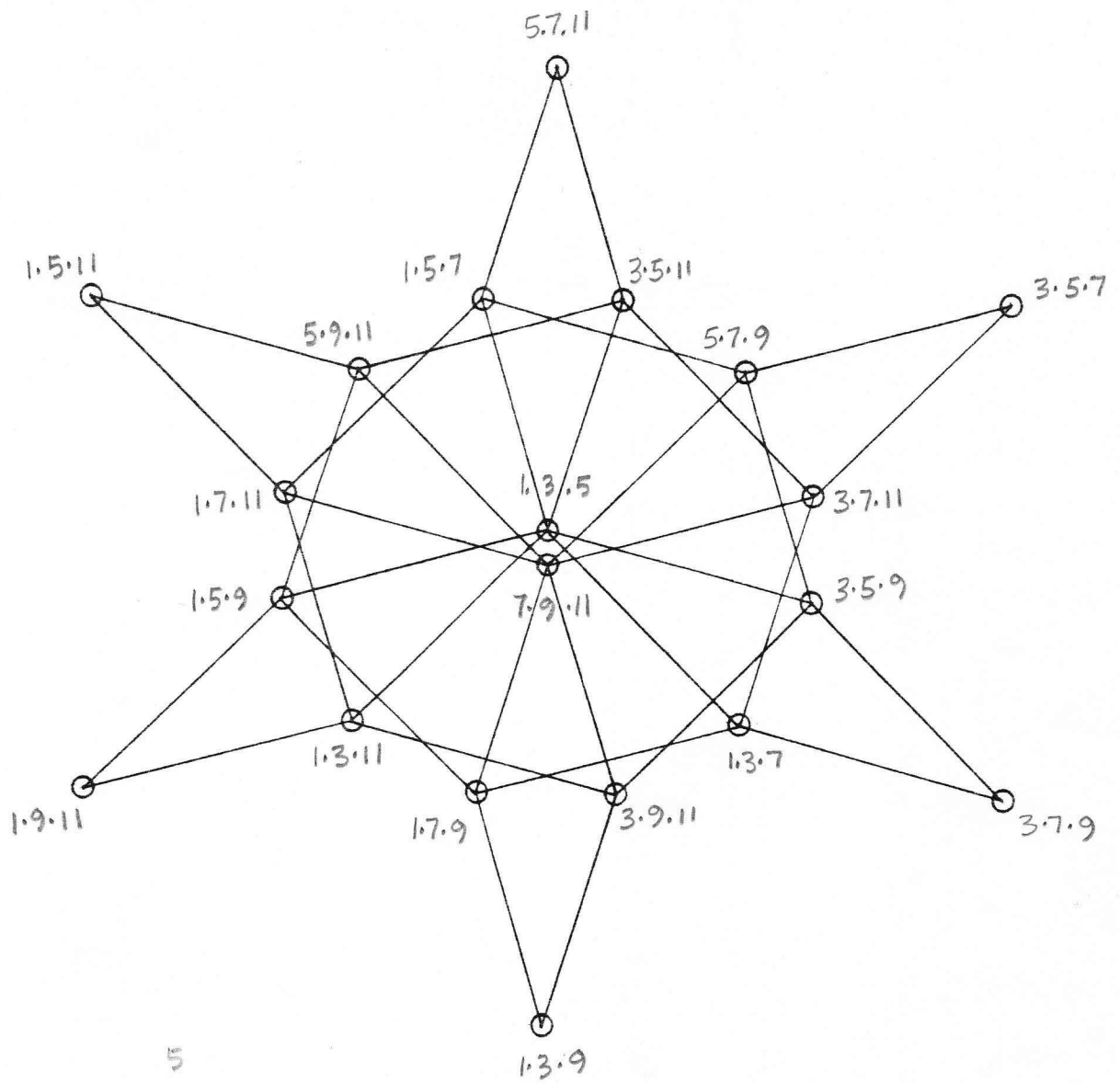
There are 15 intervals in the Hexads 6 shown, and for simplicity the remaining imagined (dotted). The 6 are the ones that reappear in the Combination Product Sets (CPS). A given interval is expressed with identical orientation and length throughout the resultant constructions.



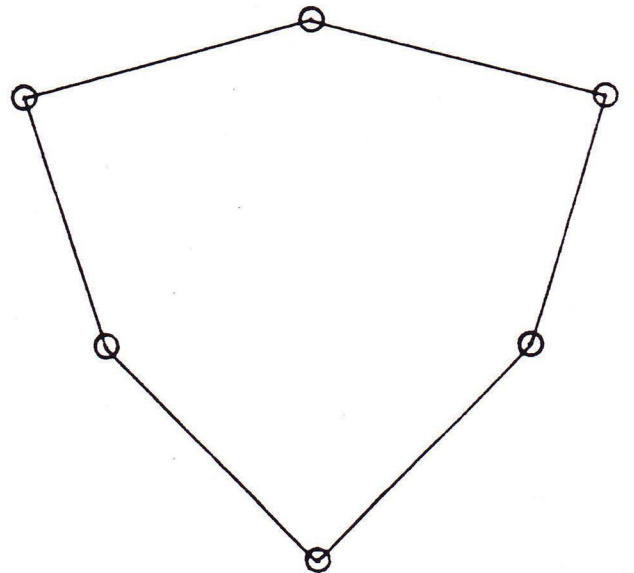
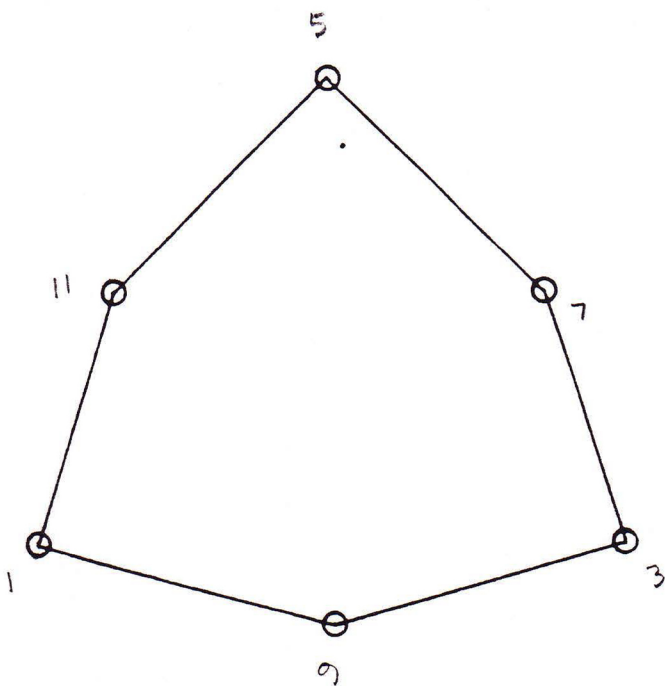
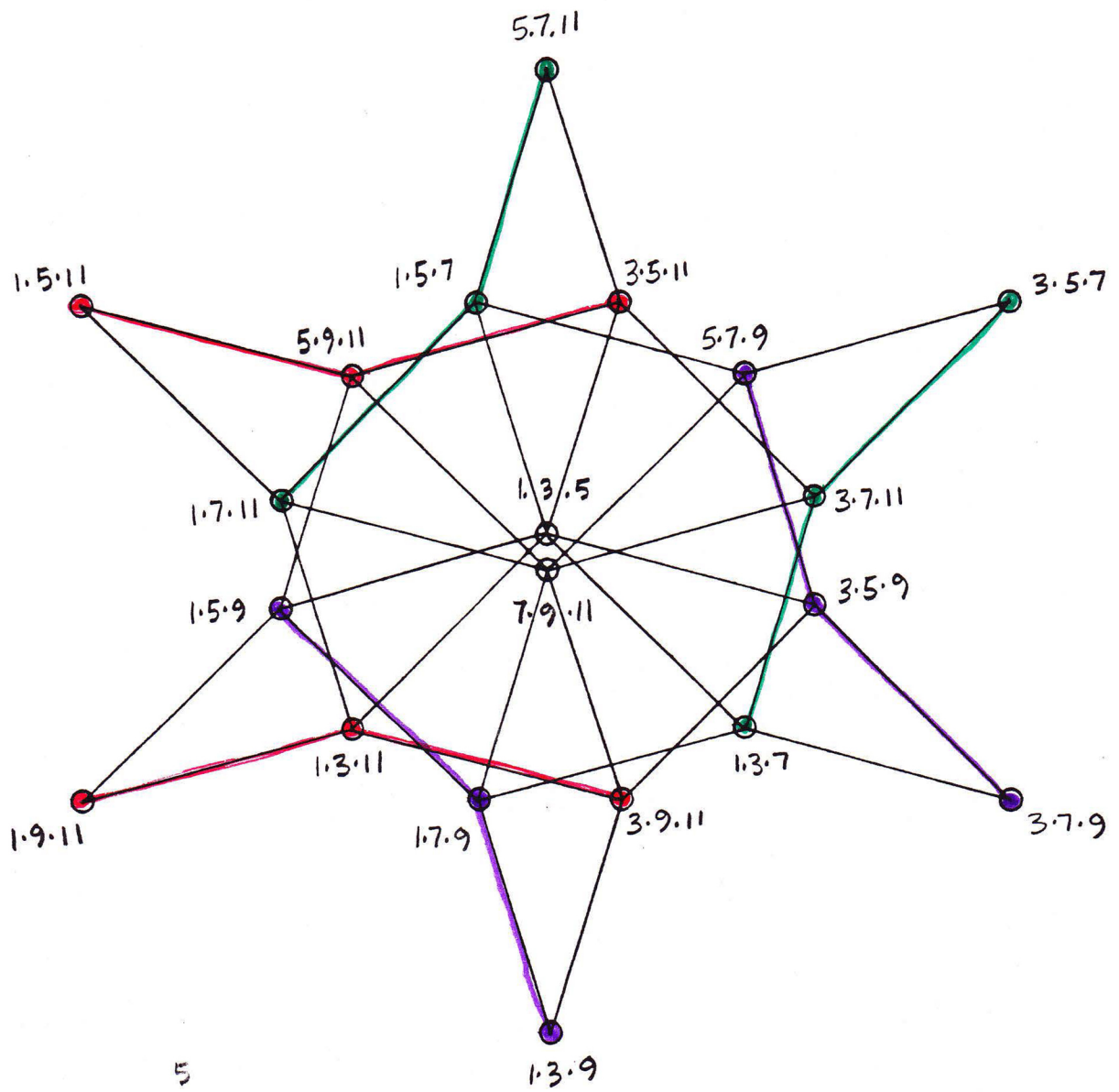
This is an "ideal" hexad but it has the limitation on the Eikosany that it puts 2 points on top of each other. But it works well for the diamond.

720°

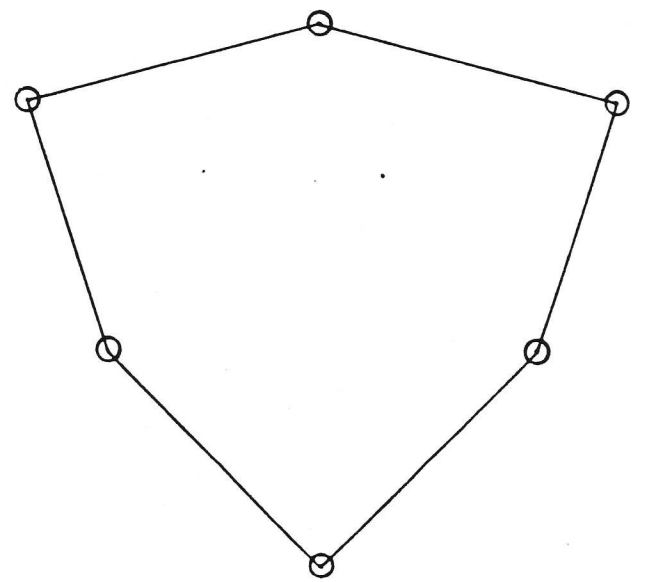
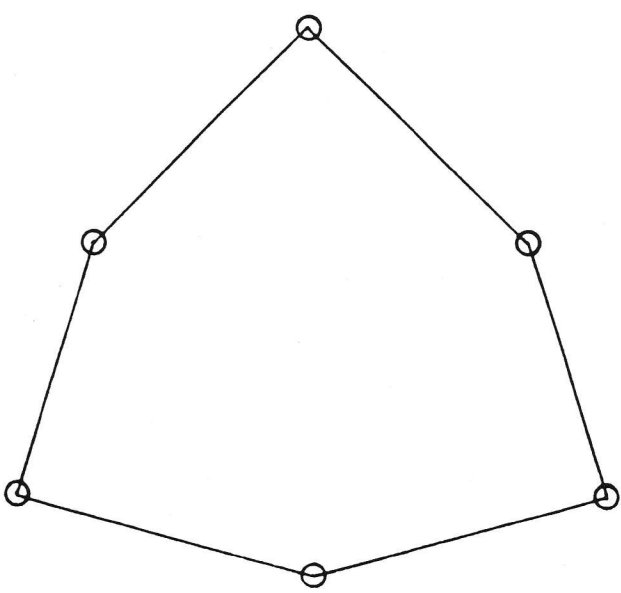
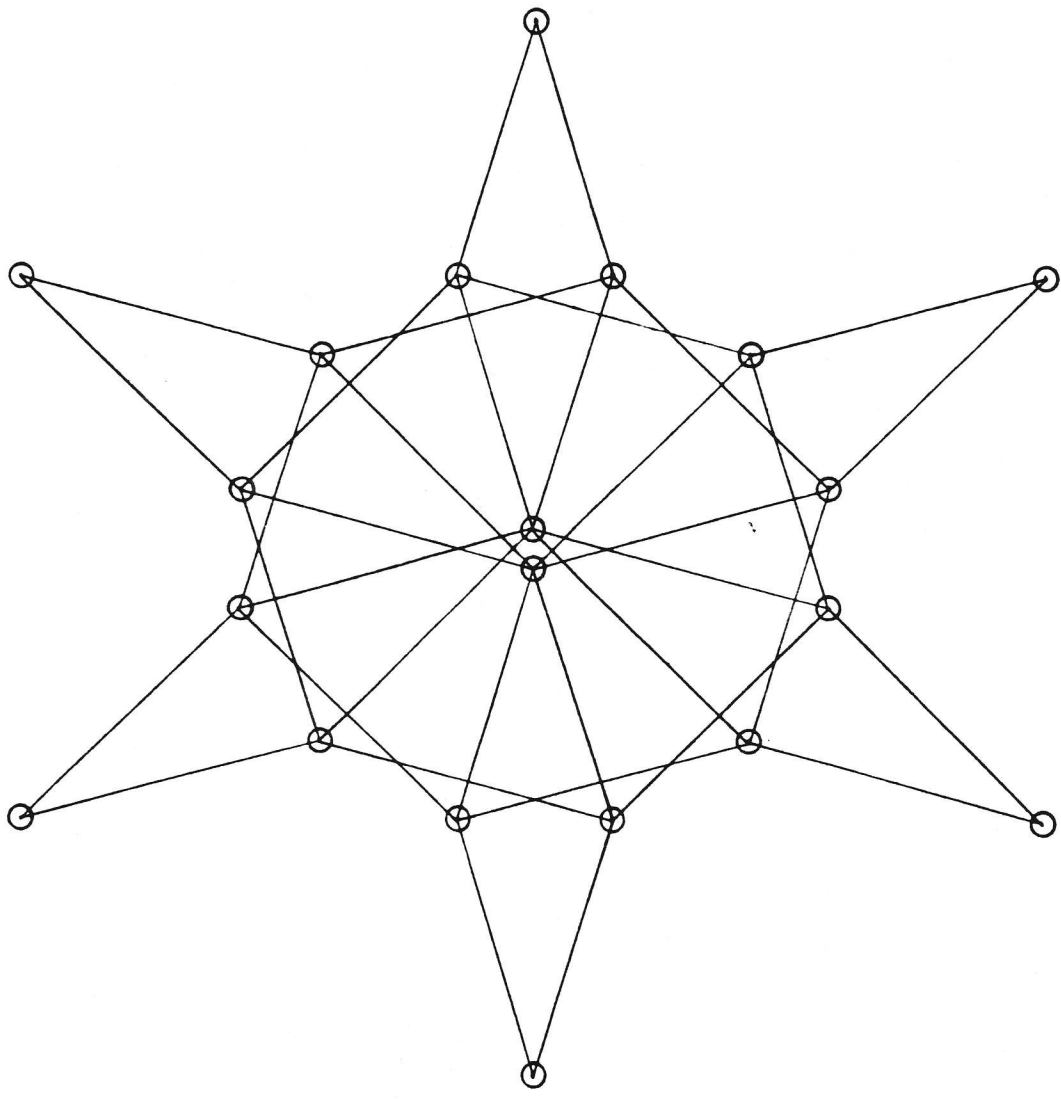




UNCENTERED PENTAD LATTICE

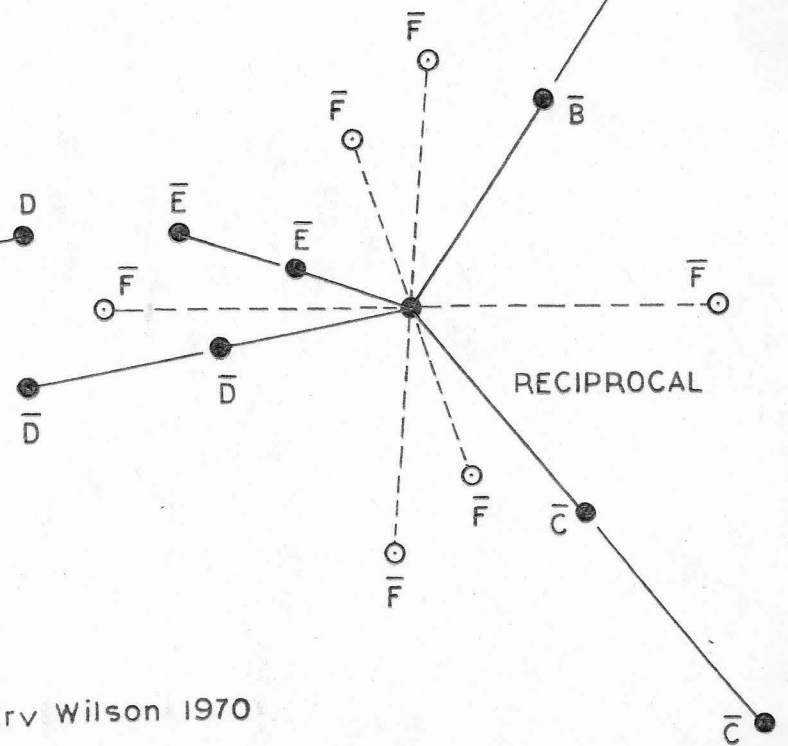
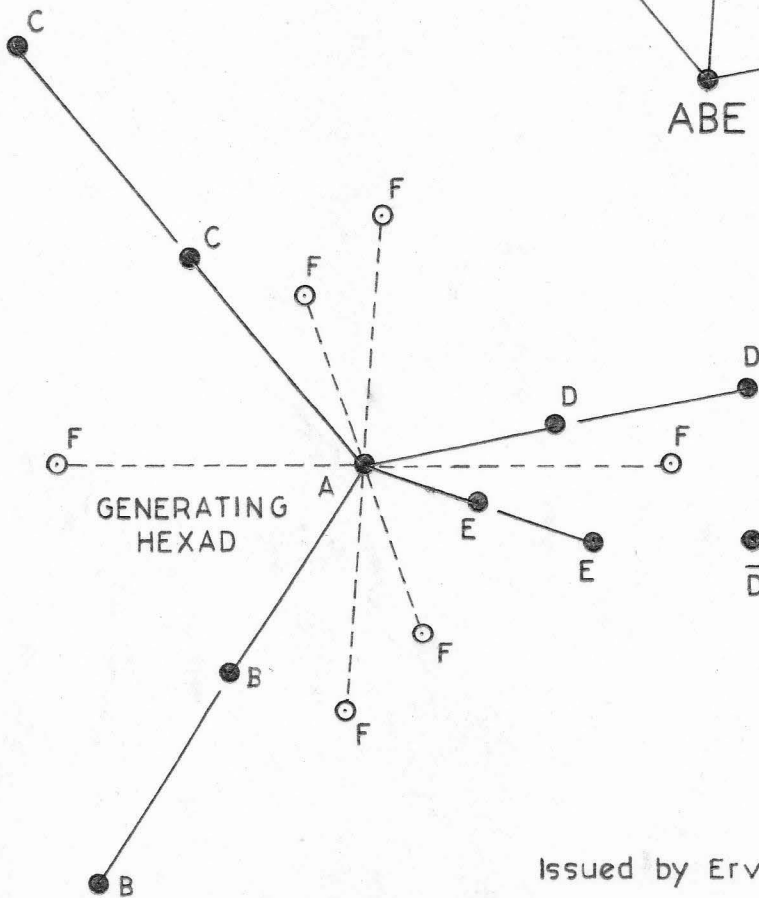
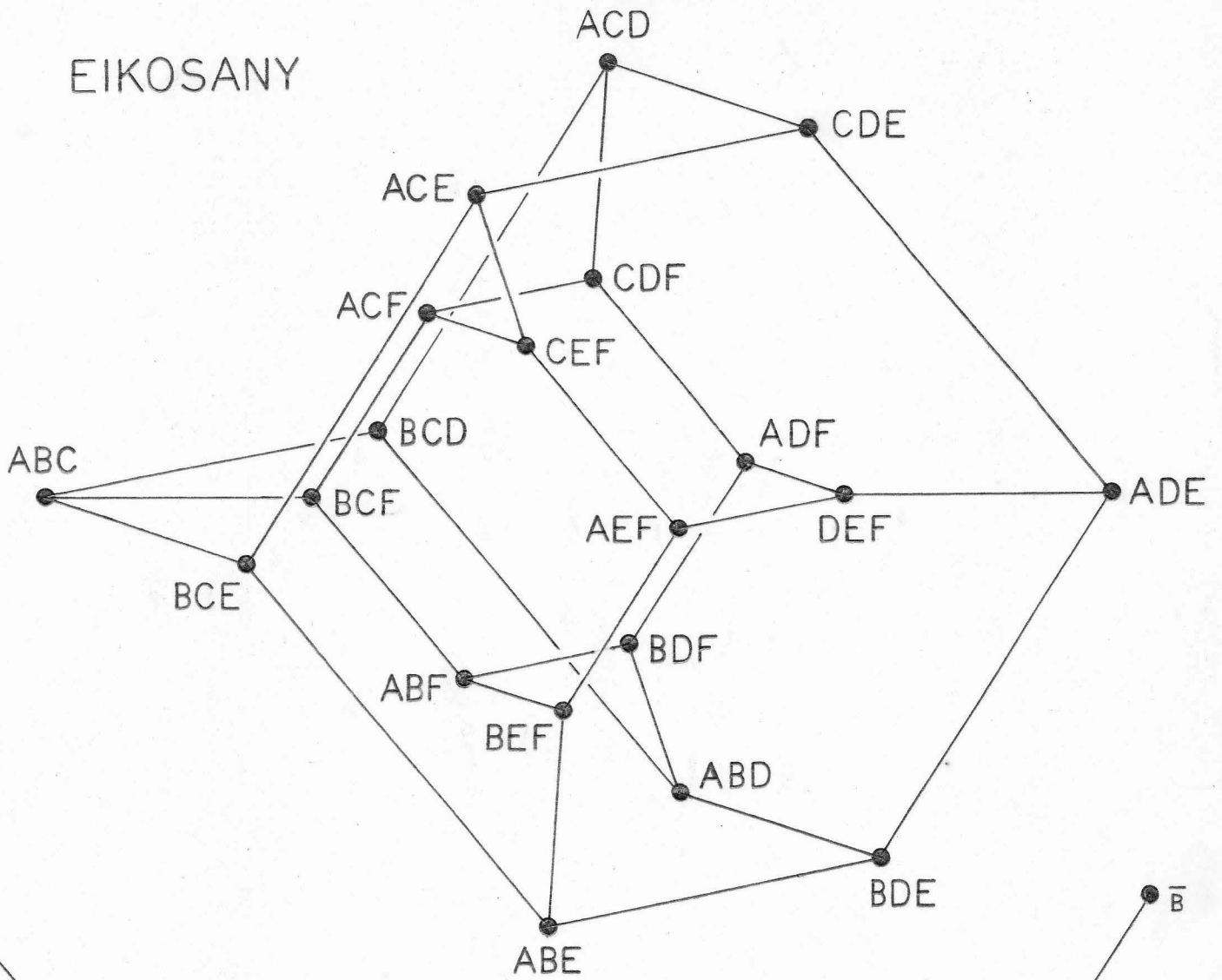


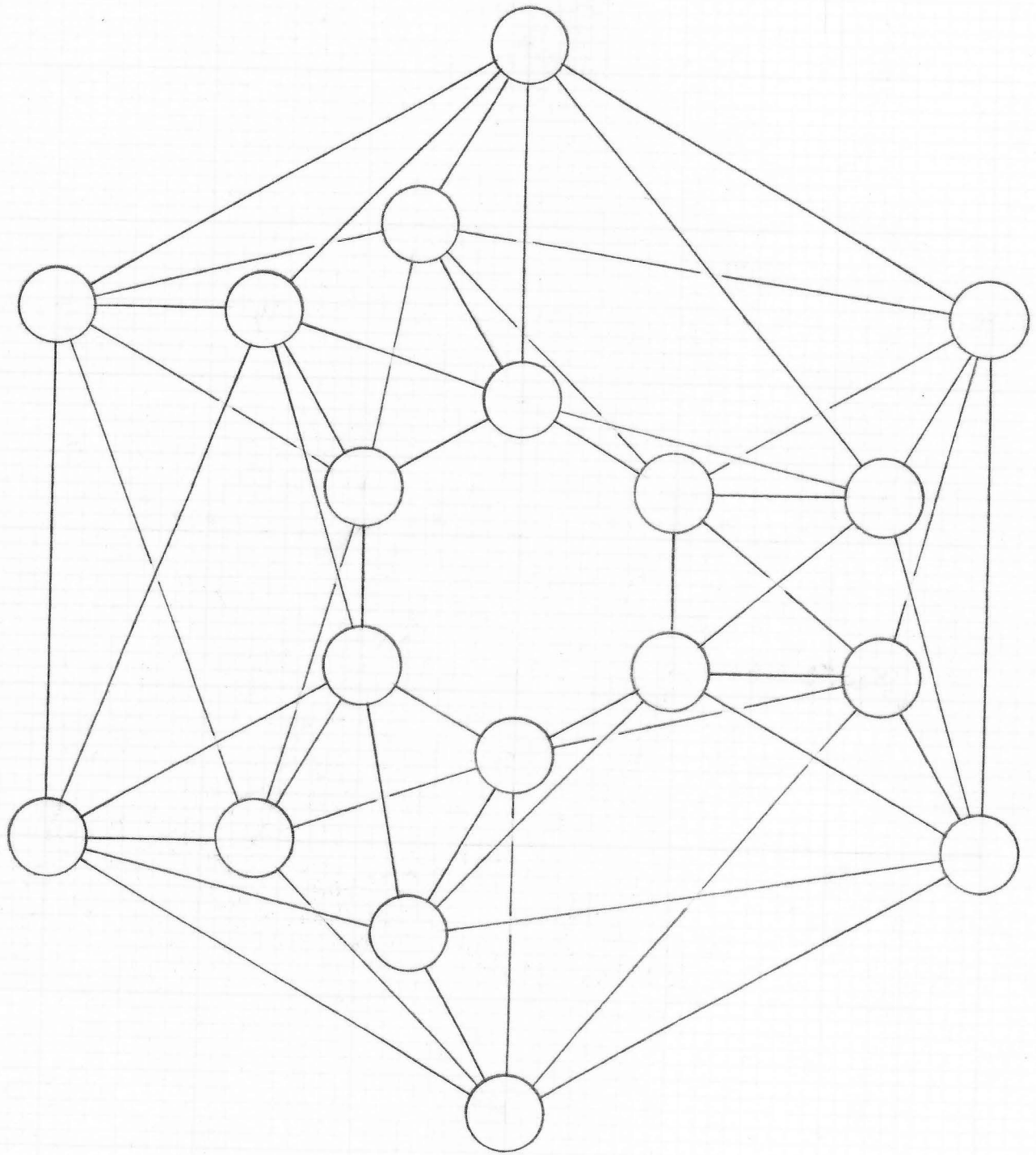
UNCENTERED PENTAD LATTICE

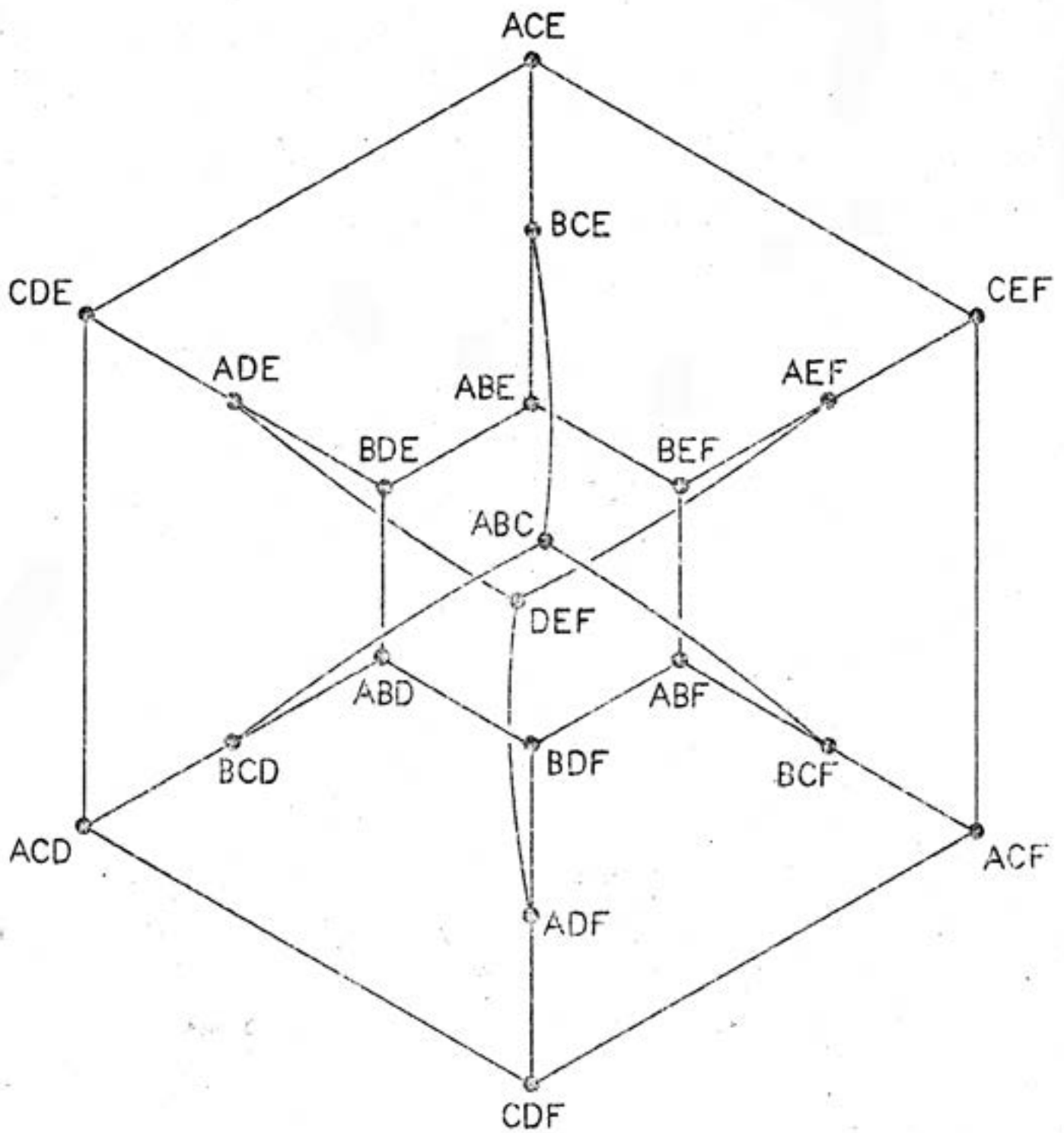


UNCENTERED PENTAD LATTICE

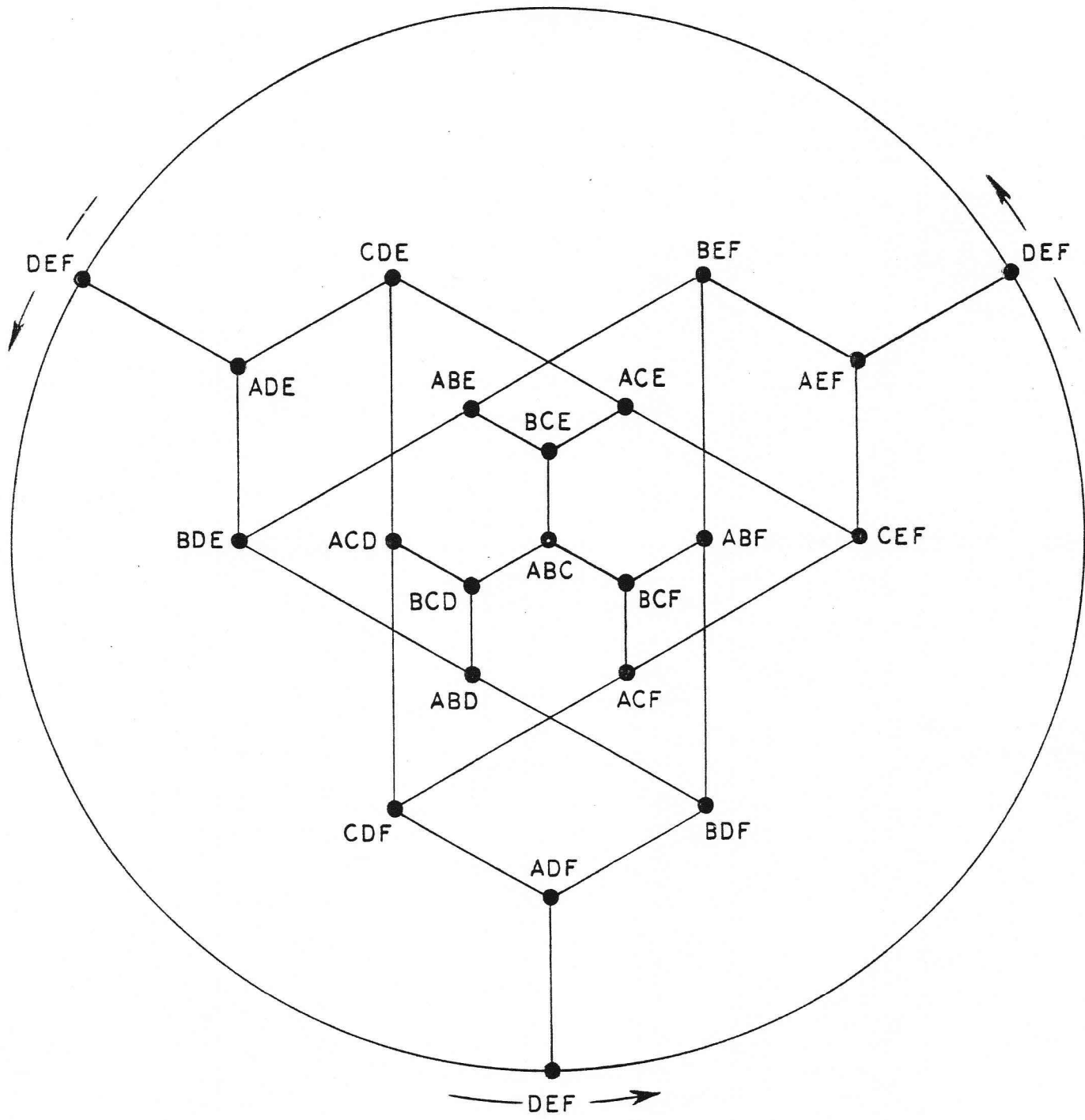
EIKOSANY



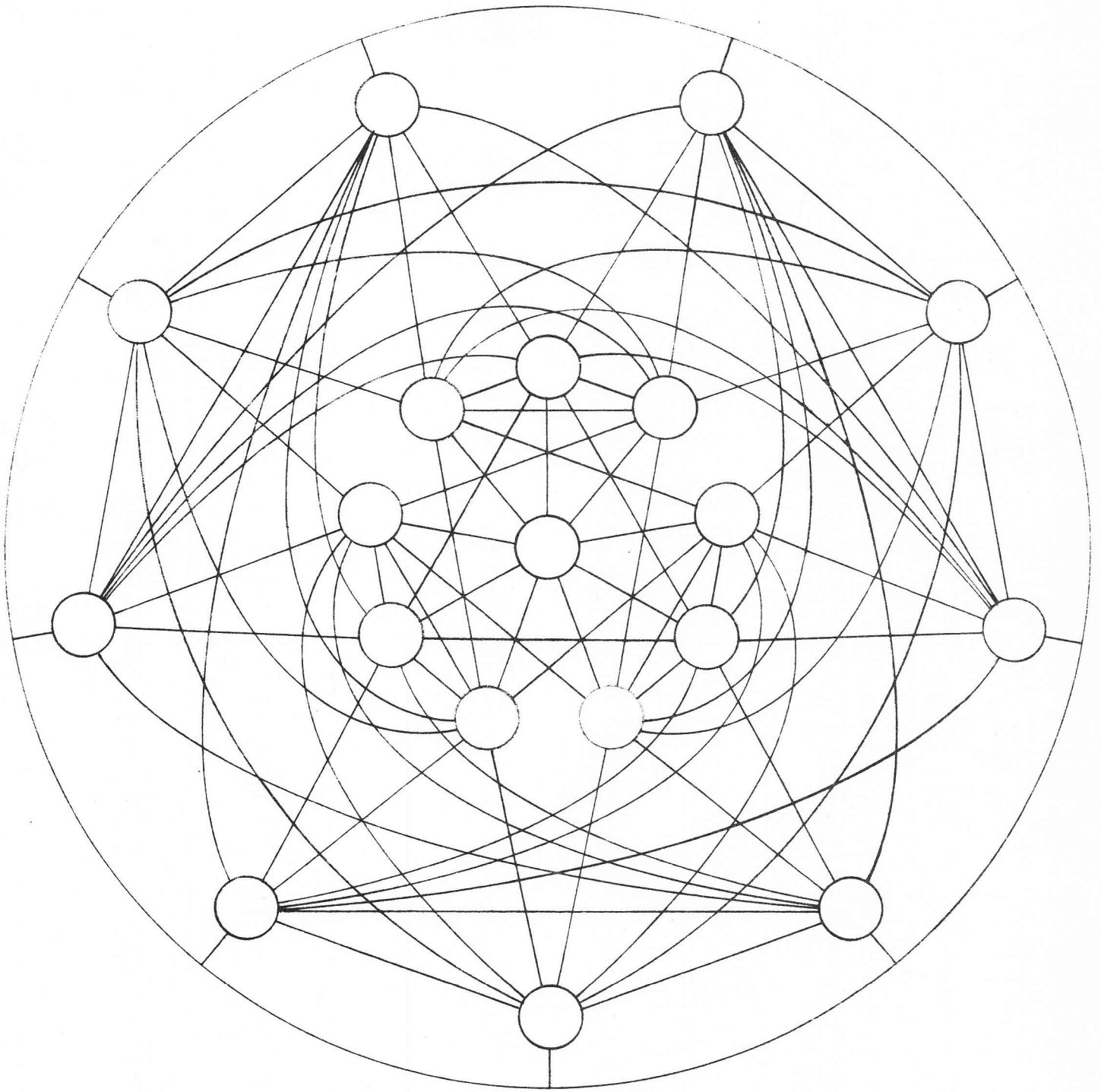


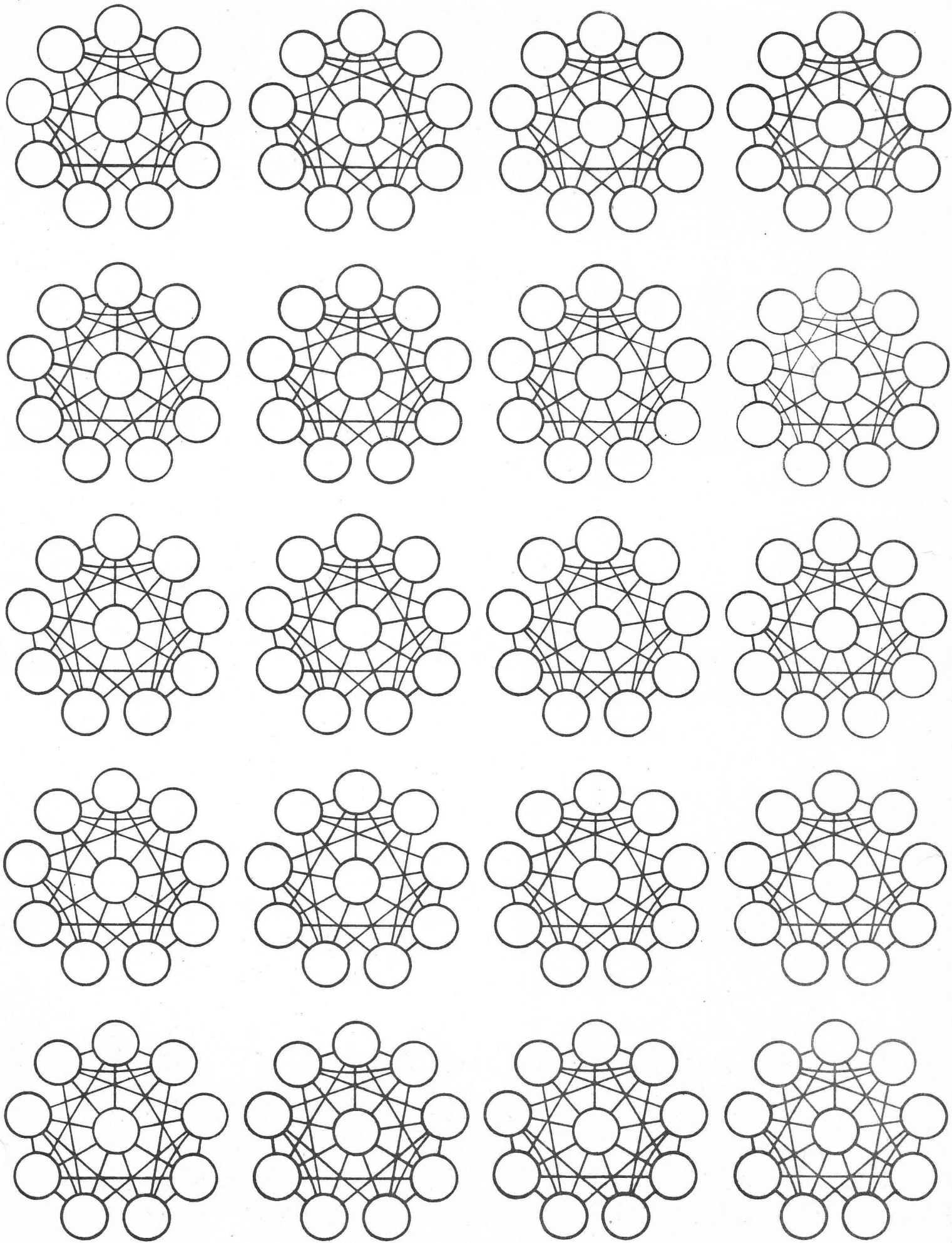


EIKOSANY



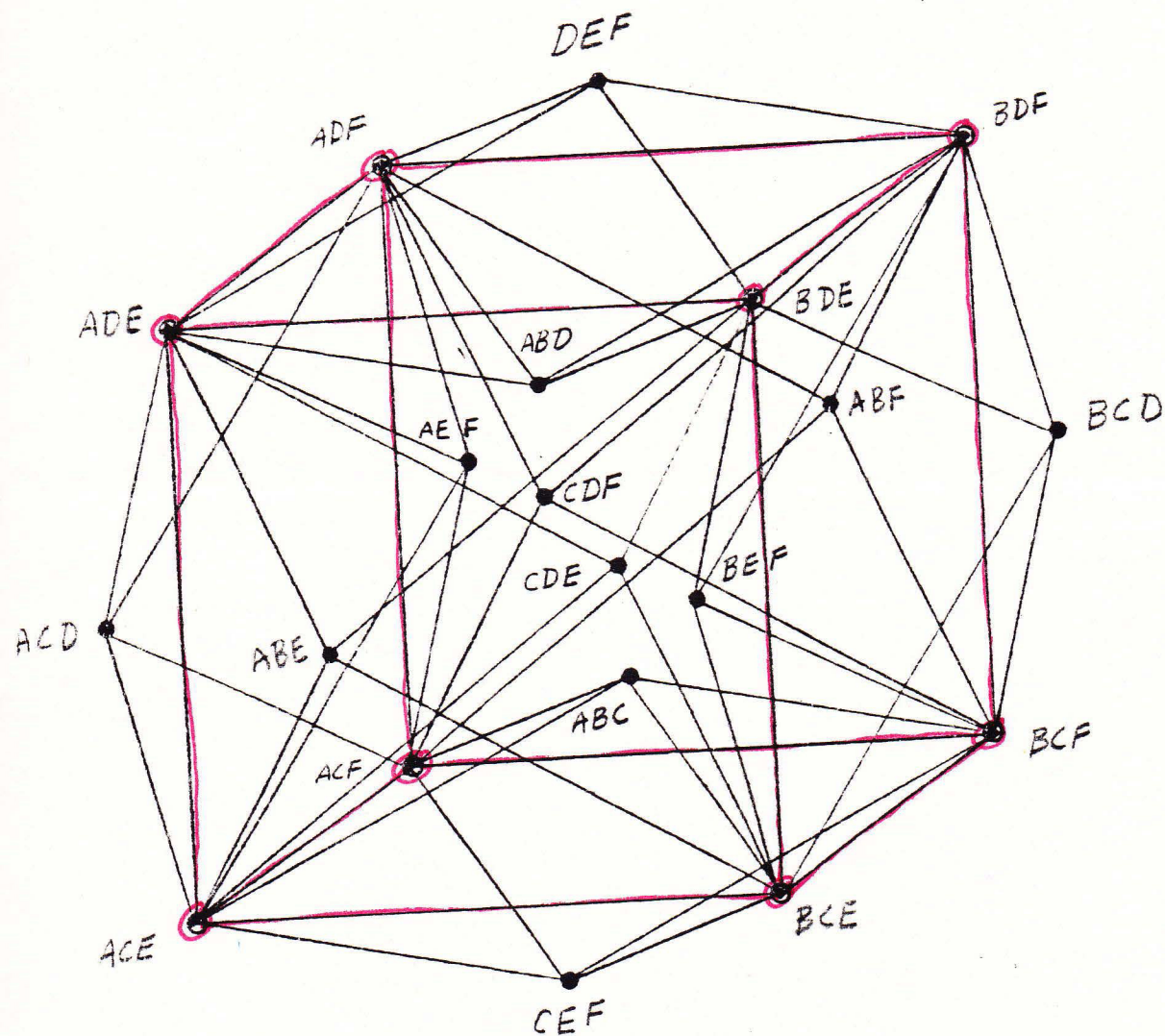
EIKOSANY





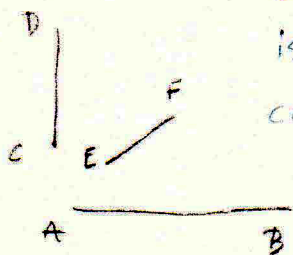
Wilson 69

TRIADIC CROSSET LATTICE

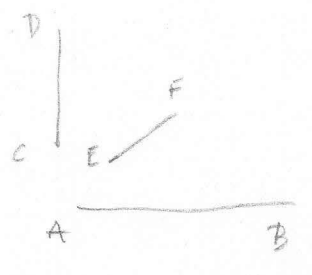
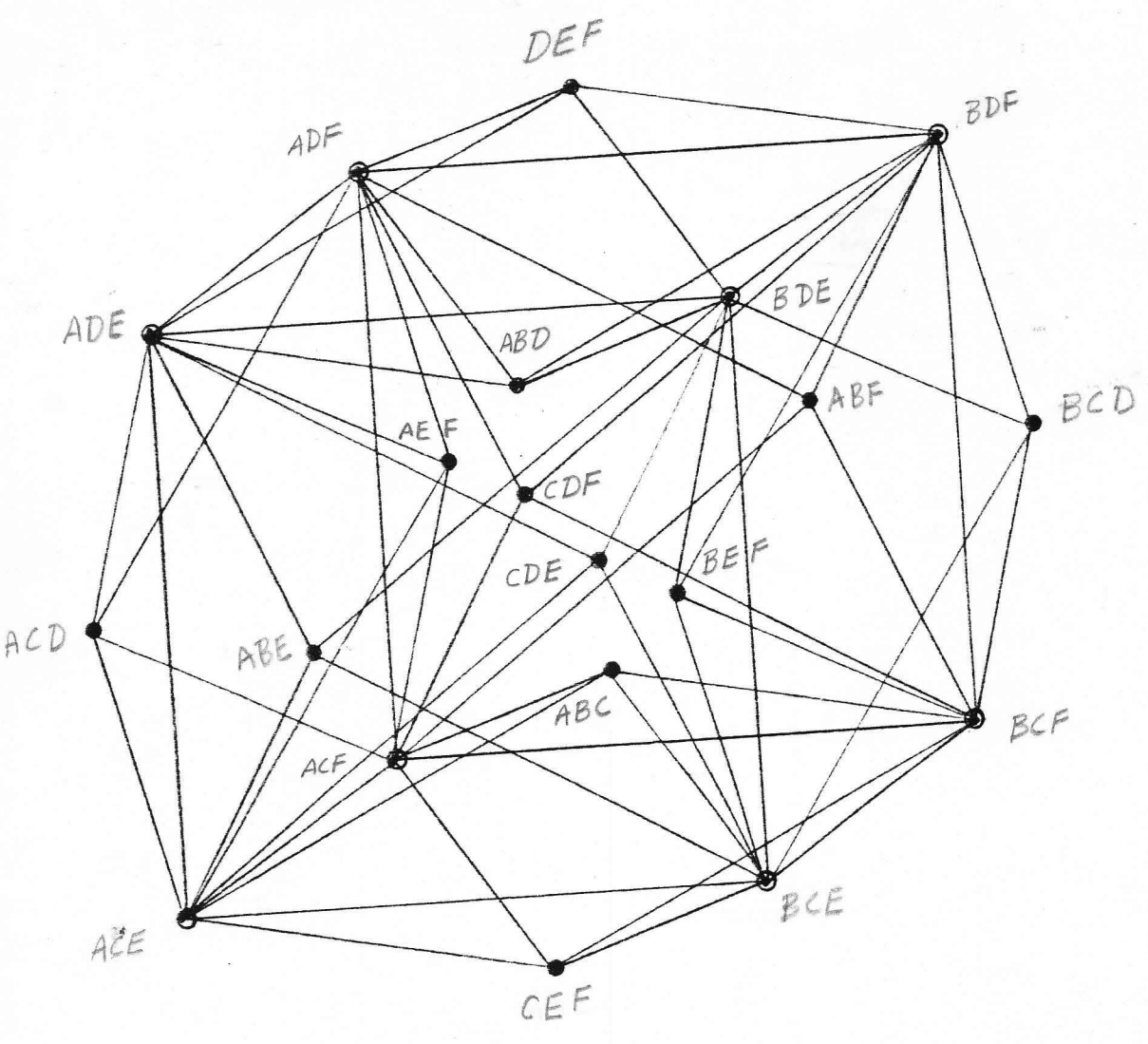


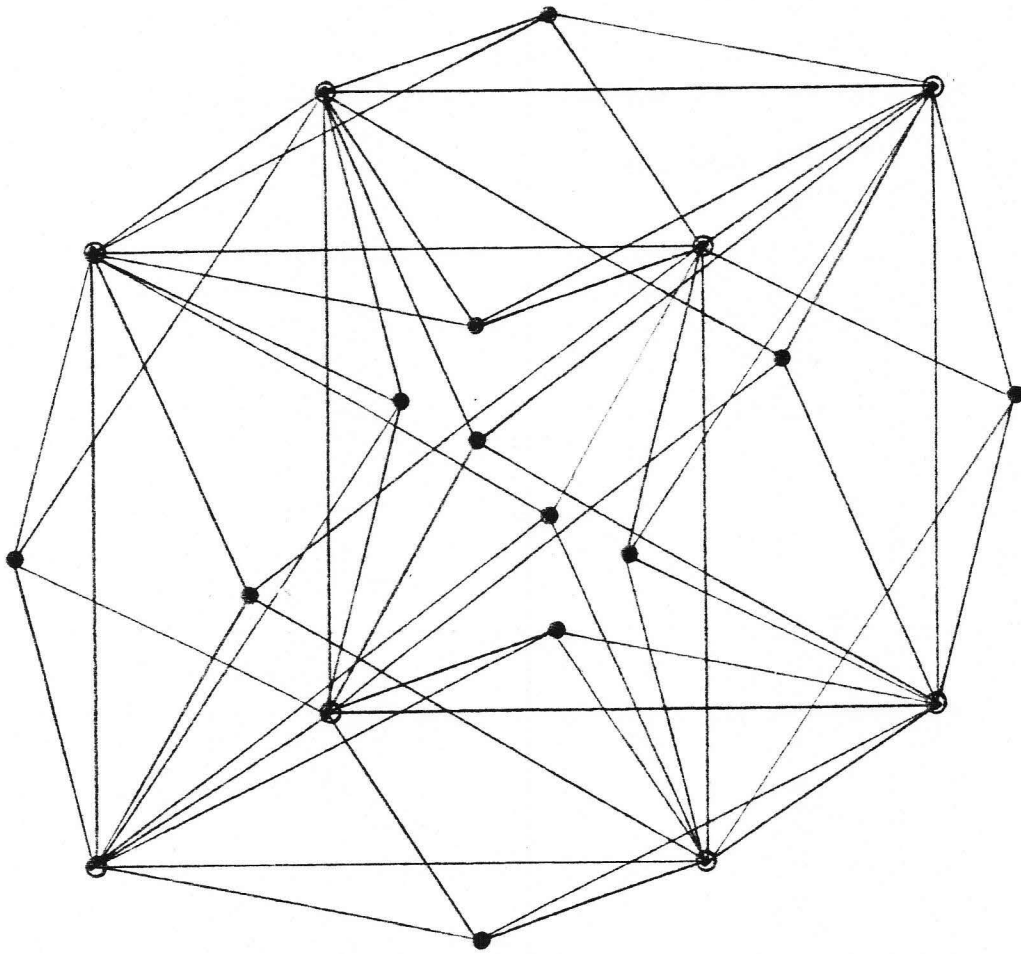
PS note

The cube as shown p (33) can be used to organize 6 hexanies, thus ↑. Each face of the cube is a dyadic ^{partitioned} cross-set of a hexany. The tones added complete the Eikosany, each member is given once.

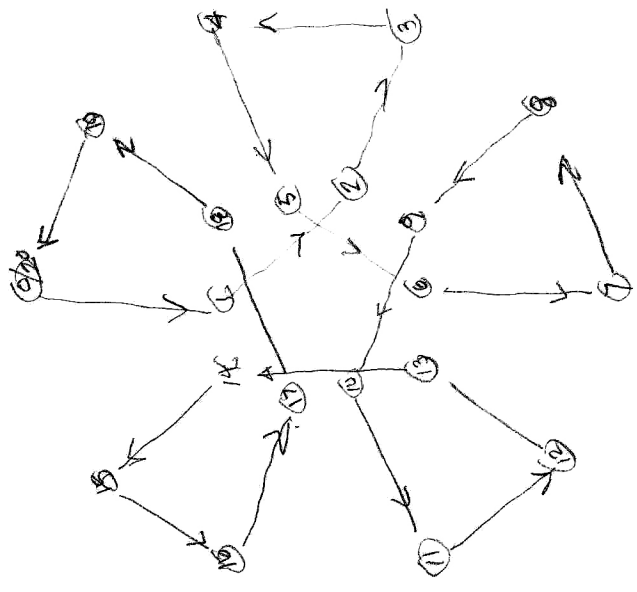
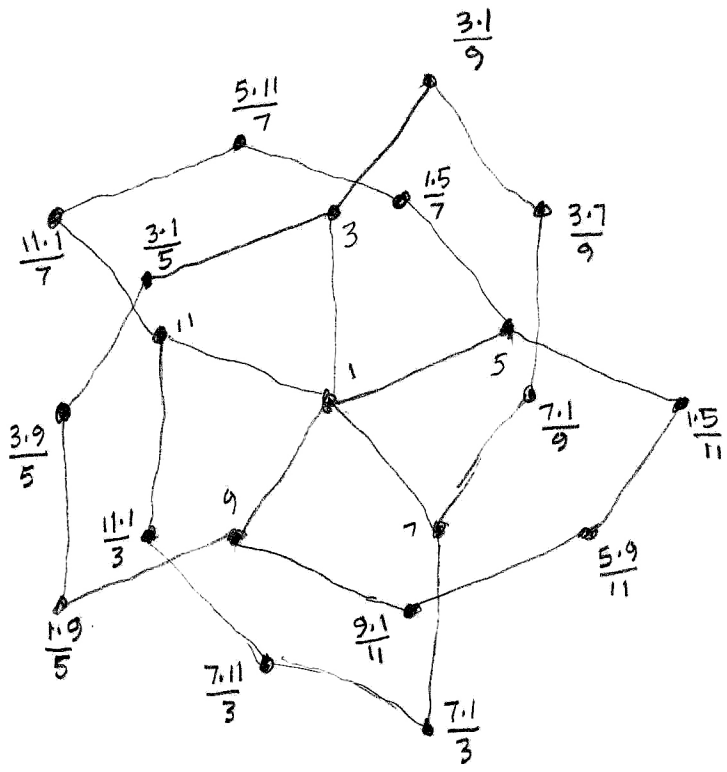


Erv



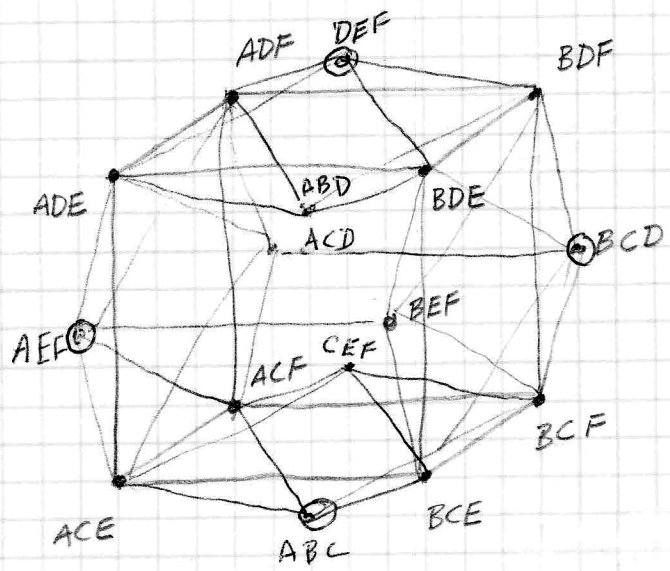


11

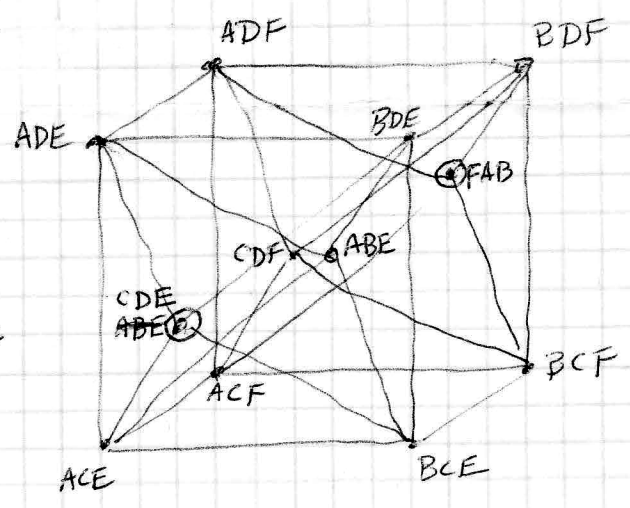
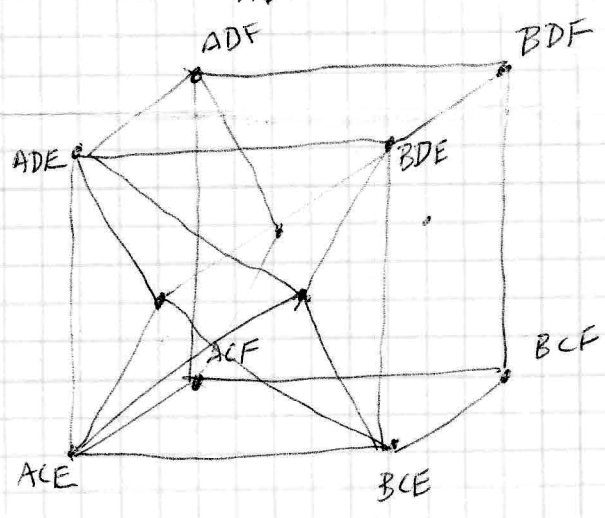


Feb 2, 1997
E.W.

C	D	E	F
C	D		
C		E	
C			F
	D	E	
	D		F
		E	F



A	B	E	F
A	B		
A		E	
A			F
	B	E	
	B		F
		E	F



A	B	C	D
A	B		
A		C	
A			D
	B	C	
	B		D
		C	D

Quasicrystalographer
 A pathway thru the Hexanys
 Work in Progress

overlapping/interlocking
 Pentadekany
 inner cycle is topological
 equivalent to outer decagon
 NOTICED

Wilsonian Eikosany 31 Jan 99 E.W.
 ©1999 by Ervin McDonald Wilson

Wilson

1	3	5	7	9	11					
5	5								1.3.5	
5			7						1.3.7	
5				9					1.3.9	
5					11				1.3.11	
	5	7							1.5.7	
	5		9						1.5.9	
	5				11				1.5.11	
		7	9						1.7.9	
		7			11				1.7.11	
			9		11				1.9.11	
		7							3.5.7	
			9						3.5.9	
					11				3.5.11	
		7	9						3.7.9	
		7			11				3.7.11	
			9		11				3.9.11	
		7	9						5.7.9	
		7			11				5.7.11	
			9		11				5.9.11	
		7	9		11				7.9.11	

Ref Quasicrystals, Paul Joseph Steinhardt, 1986, in
 American Scientist Vol 74, 1986 Nov-Dec
 Steinhardt & Overlapping Eikosany
 Yellows

"The 20 triads"
 Harry Partch, Genesis of a Music, P123

- 1 =
- 1/2 =
- 1/3 =
- 1/4 =
- 1/5 =
- 1/6 =
- 1/7 =
- 1/8 =
- 1/9 =
- 1/10 =
- 1/11 =
- 1/12 =
- 1/13 =
- 1/14 =
- 1/15 =
- 1/16 =
- 1/17 =
- 1/18 =
- 1/19 =
- 1/20 =

Partchian Diamond (per E.W.)
 31 Jan 99 E.W.
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Ref Genesis of a Music, Harry Partch
 1949

Complementary Dekagrams of the 1.3.5.7.9.11 Eikosagram

Aspect: $11\frac{3}{5}$ - Ear-training Exercise
97

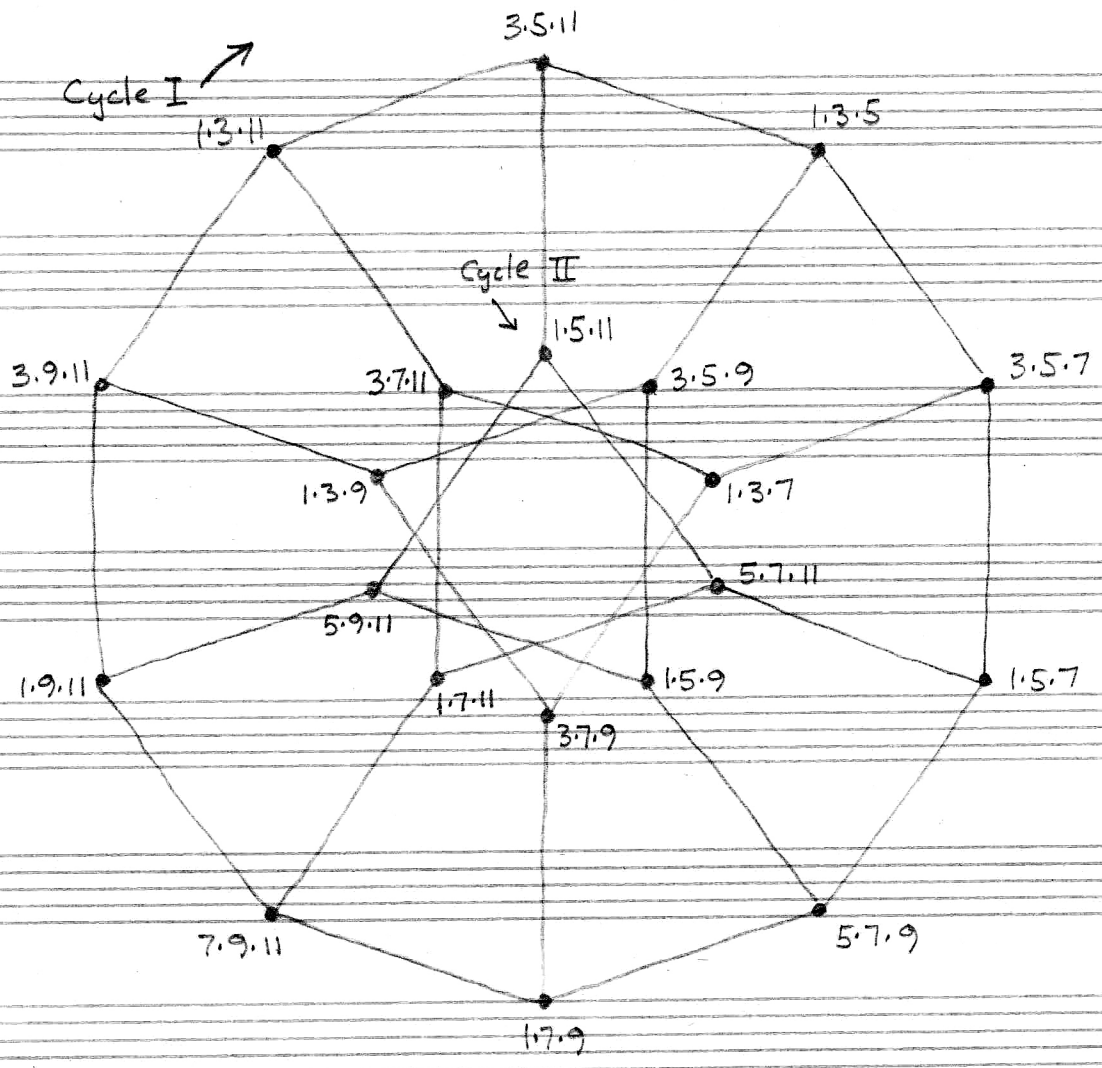
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Cycle I

	1:5	11:1	1:7	3:1	1:9	5:1	1:11	7:1	1:3	9:1
Tuning	1.3.11 264	3.5.11 330	1.3.5 480	3.5.7 420	1.5.7 280	5.7.9 315	1.7.9 252	7.9.11 346.5	1.9.11 396	3.9.11 297

Cycle II

	1:7	5:1	1:3	11:1	1:9	7:1	1:5	3:1	1:11	9:1
	1.5.11 440	5.7.11 385	1.7.11 308	3.7.11 462	1.3.7 336	3.7.9 378	1.3.9 432	3.5.9 270	1.5.9 360	5.9.11 495



Complementary Dekagrams 1.3.5.7.9.11 Eikosagram

1st Version

I					
	1.3.11 5	3.5.11 7	1.3.5 11	3.5.7 1.5.7 5.7.9 3 1 9	1.7.9 7.9.11 1.9.11 3.9.11 1.3.11 3.5.11 11 7 7 9 1 5
II					
	1.5.11 3	5.7.11 11	1.7.11 9	3.7.11 7	1.3.7 5
Measure	1,	2,	3,	4,	5,

I					
	5.7.9 1.7.9 7.9.11 1.9.11 3.9.11 1.3.11 3.5.11 1.3.5 3.5.7 1.5.7 5.7.9 1.7.9 7.9.11 1.9.11 3.9.11 5 1 11 3 7 9 11 1 7 9 7 5 7 1 3				
II					
	3.7.9 3	1.3.9 11	3.5.9 9	1.5.9 7	5.9.11 5
Measure	6,	7,	8,	9,	10,

2nd Version

I					
	1.3.11 7	3.5.11 3	1.3.5 9	3.5.7 5	1.5.7 11
II					
	1.3.7 3.7.11 1.7.11 5.7.11 1.5.11 5.9.11 1.5.9 3.5.9 1.3.9 3.7.9 1.3.7 3.7.11 1.7.11 5.7.11 1.5.11 11 7 3 7 1 9 3 7 5 9 1 11 5 7 7				
Measure	11,	12,	13,	14,	15,

I					
	5.7.9 7	1.7.9 3	7.9.11 9	1.9.11 5	3.9.11 11
II					
	5.9.11 1.5.9 3.5.9 1.3.9 3.7.9 1.3.7 3.7.11 1.7.11 5.7.11 1.5.11 5.9.11 1.5.9 3.5.9 1.3.9 3.7.9 11 1 3 7 7 9 3 1 5 9 7 11 5 1 7				
Measure	16,	17,	18,	19,	20,

Tree Toad

12 Variation

11

13

14

15

Handwritten musical score for Variation 12, showing two systems of staves (I and II) with notes and chord diagrams. The notes are often marked with 'x' or 'o' and have numerical labels below them. The chord diagrams show fingerings for various chords.

Scale:
Keyboard series:

1.	10.	19.	6.	15.	2.	11.	20.	7.	16.	3.	
E+	E+	A+	D+	G+	C+	F+	B+	E+	A+	E+	
3.9.15	1.9.15	1.3.15	7.9.15	3.7.15	1.7.15	(1.7.15) 3	9.11.15	3.11.15	1.11.15	1.3.9	
pitch	270	360	480	315	420	280	373.33..	495	330	440	288

12.	21.	8.	17.	4.	13.	9.	18.	5.	14.		
X+	B.	E.	A.	D.	G.	F	B	E	A		
7.11.15	3.7.9	1.7.9	1.3.7	(3.9.11)	3.9.11	1.9.11	1.3.11	7.9.11	3.7.11		
Pitch	385	504	336	448	297	396	264	352	462	308	410.66''

Tree Toad

melodic

0 0 0 0 0 0
-2 -1 7 +1 +2

(Fixed)

Handwritten musical notation on a single staff with notes and fingerings 0, 1, 2, 3, 4, 5.

Handwritten musical notation on a single staff with notes and fingerings 1, 10, 19.

Handwritten musical notation on a single staff with notes and fingerings 1, 2, 3, 4, 5.

Handwritten musical notation for two staves (I and II) with complex chord structures and fingerings.

Staff I: $\frac{23}{15}$, $\frac{14}{11}$, $\frac{12}{11}$, $\frac{18}{11}$, $\frac{12}{11}$, $\frac{22}{15}$, $\frac{16}{11}$, $\frac{18}{11}$, $\frac{22}{15}$, $\frac{14}{11}$, $\frac{16}{11}$, $\frac{18}{11}$, $\frac{12}{11}$.
 Staff II: $\frac{20}{4}$, $\frac{11}{9}$, $\frac{15}{11}$, $\frac{12}{11}$, $\frac{11}{8}$, $\frac{22}{15}$.

6. 7. 8. 9. 10.

Handwritten musical notation for two staves (I and II) with complex chord structures and fingerings.

Staff I: $\frac{22}{15}$, $\frac{14}{11}$, $\frac{18}{11}$, $\frac{12}{11}$, $\frac{22}{15}$, $\frac{14}{11}$, $\frac{18}{11}$, $\frac{12}{11}$, $\frac{22}{15}$, $\frac{14}{11}$, $\frac{18}{11}$, $\frac{12}{11}$.
 Staff II: $\frac{11}{9}$, $\frac{14}{11}$, $\frac{12}{11}$, $\frac{12}{11}$, $\frac{11}{8}$, $\frac{22}{15}$.

to beginning

The 60 rotations of 6 elements
(excludes mirrors (x2) & cyclics (x6))

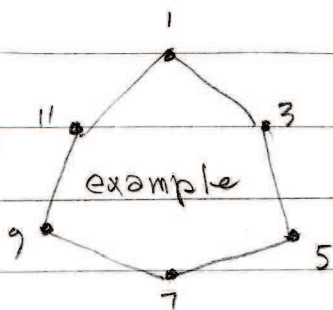
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1 3 5	7 9 11 x	1 3 11 5 7 9	15 11 3 7 9	19 11 3 5 7 x
	7 11 9 x	5 9 7	3 9 7	3 7 5 x
	9 7 11	7 5 9	7 3 9	5 3 7 x
	9 11 7 x	7 9 5	7 9 3	5 7 3 x
	11 7 9	9 5 7 x	9 3 7 x	7 3 5 x
	11 9 7 x	9 7 5 x	9 7 3 x	7 5 3 x

1 3 7	5 9 11 x	1 5 7 3 9 11 x	1 7 9 3 5 11
	5 11 9 x	3 11 9 x	3 11 5
	9 5 11	9 3 11	5 3 11
	9 11 5 x	9 11 3 x	5 11 3
	11 5 9	11 3 9	11 3 5 x
	11 9 5 x	11 9 3 x	11 5 3 x

How many ways to get
from the 1357 tetrad
to its opposite? Look for
some sequence of 1357
together, (or 911 continuous).
30 ways, indicated (x).
Half of all ways.

1 3 9	5 7 11	1 5 9 3 7 11	1 7 11 3 5 9
	5 11 7	3 11 7	3 9 5
	7 5 11	7 3 11	5 3 9
	7 11 5	7 11 3	5 9 3
	11 5 7 x	11 3 7 x	9 3 5 x
	11 7 5 x	11 7 3 x	9 5 3 x



Partitioned Triadic Cross-Sets

In the (3,6) 1,3,5,7,9,11 Eikosony

Jan 2, 1997

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Read first Partitioned Cross-Sets of the Hebdomekontany, 1989 by E.M. Wilson, pages 4 and 5. Then look at Fig 4 of D'Alessandro, 1989, XH VII, E.M. Wilson. Now, then -

In the (3,6) Eikosony the (1,3) Triany forms a partitioned cross-set with the (2,3) triany. There are 20 combinations by which this partitioning may occur. Please note; the (2,3) triany carries a concealed sub-harmonic triad. Example

($\bar{5}$ $\bar{3}$ T) is concealed in

x	(1,3	1,5	3,5)	} Eikosony terms. (Tonic is 1,3,5)
7	1,3,7	1,5,7	3,5,7	
9	1,3,9	1,5,9	3,5,9	
11	1,3,11	1,5,11	3,5,11	

And we see above the result is a set of 9 Eikosony terms. Interestingly, each of these ties back to the tonic term 1,3,5! by virtue of 2 shared elements. When 1,3,5 is taken as 1/1 the cross-set appears in the following quasi-diamondic form;

x	$\bar{5}$	$\bar{3}$	T	} diamondic terms (Tonic is 1/1)
7	7/5	7/3	7/1	
9	9/5	9/3	9/1	
11	11/5	11/3	11/1	

Again - there are 20 permutations of this beautiful geometry, imbedded in the Eikosony. These are the 20 bonding-sites between Eikosony & Diamond - as sets of 10 terms. Also please see fig 15 of D'Alessandro.

A complete pentadic cross-set can be made as shown;

x	2	3	5	7	11
2	2.2	2.3	2.5	2.7	2.11
3	3.2	3.3	3.5	3.7	3.11
5	5.2	5.3	5.5	5.7	5.11
7	7.2	7.3	7.5	7.7	7.11
11	11.2	11.3	11.5	11.7	11.11

Scarcely concealed within the cross-set is the 2-out-of-5 combination-product set of the master set 2, 3, 5, 7, 11. This can be formatted as shown: ↴

Ref. 3-out-of-5 ↴ also of interest

$\binom{2}{5}$	2	3	5	7	11	$\times \overline{2,3,5,7,11} =$	$\binom{3}{5}$	$\overline{2}$	$\overline{3}$	$\overline{5}$	$\overline{7}$	$\overline{11}$	
	2	3											
	2		5								$\overline{5}$	$\overline{7}$	$\overline{11}$
	2			7							$\overline{3}$		$\overline{11}$
	2				11						$\overline{3}$	$\overline{5}$	$\overline{7}$
		3	5										
		3		7									
		3			11								
			5	7									
			5		11								

(2-out-of-5)	(3-out-of-5)	(2-out-of-5)
<u>2 3 5 7 11</u>	<u>2 3 5 7 11</u>	<u>2̄ 3̄ 5̄ 7̄ 11̄</u>
2 3	2 3 5	
2 5	2 3 7	
2 7	2 3 11	
2 11	2 5 7	
3 5	2 5 11	
3 7	2 7 11	
3 11	3 5 7	
5 7	3 5 11	
5 11	3 7 11	
7 11	5 7 11	

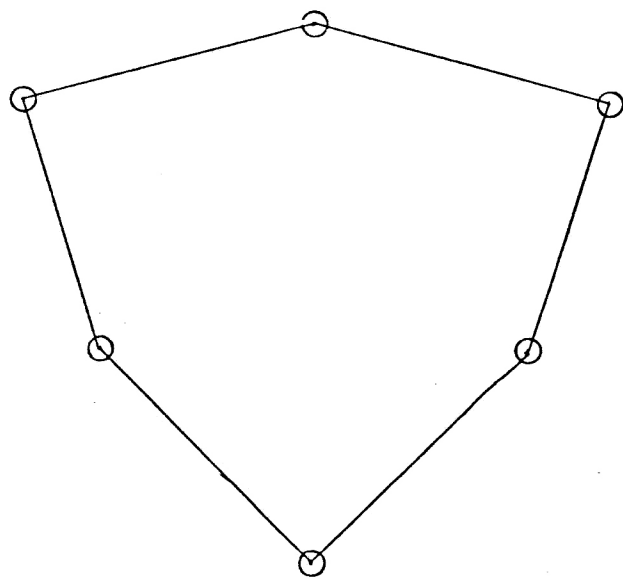
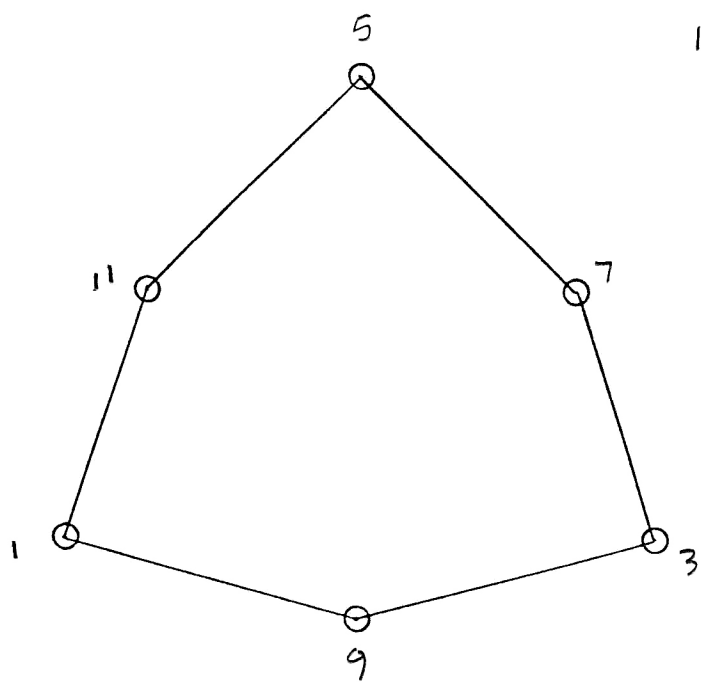
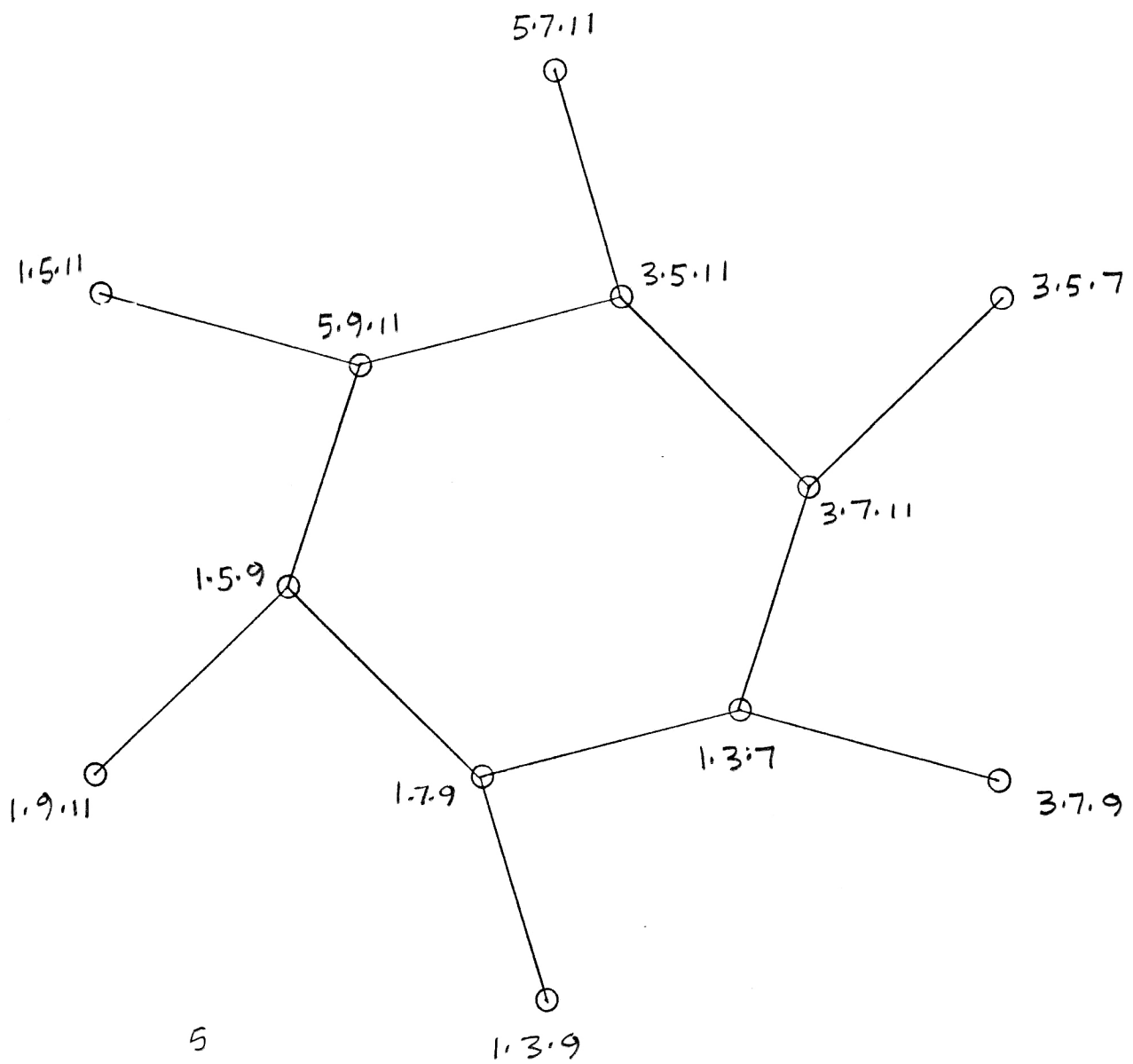
$\times \overline{2, 3, 5, 7, 11} =$

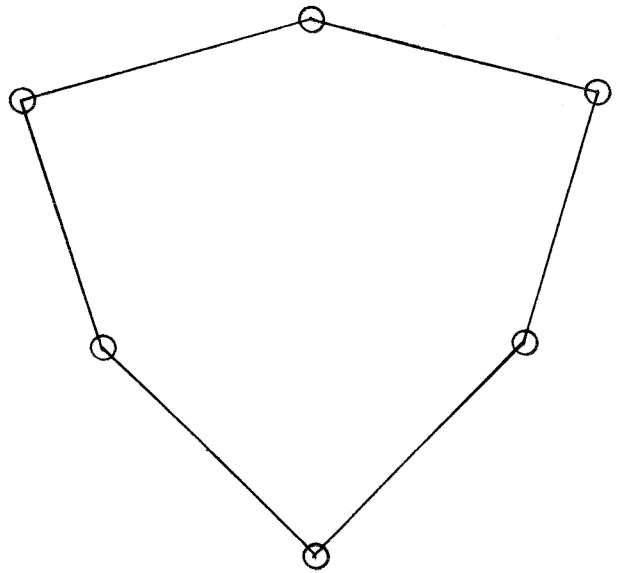
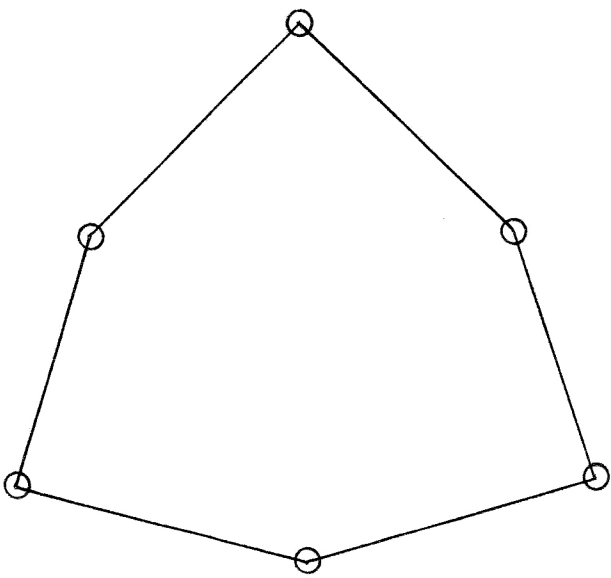
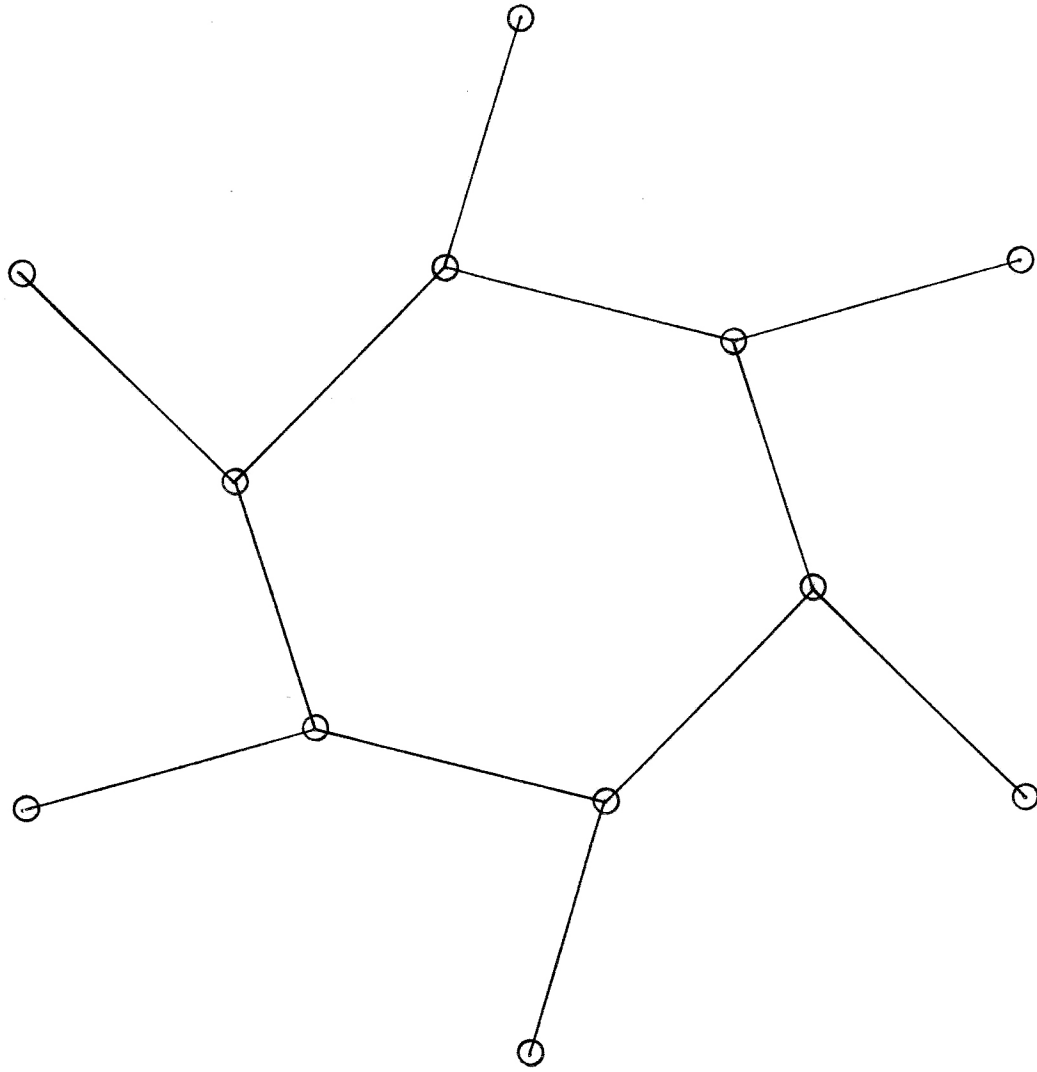
			7̄ 11̄
		5̄	11̄
		5̄ 7̄	
	3̄		11̄
	3̄		7̄
	3̄ 5̄		
2̄			11̄
2̄			7̄
2̄		5̄	
2̄ 3̄			

This operation shows how the $\binom{3}{5}$ or 3-out-of-5 set can be the subharmonic mirror of the $\binom{2}{5}$ or 2-out-of-5 set. Likewise, to fill out the picture;

(2-out-of-5)	(3-out-of-5)	subharmonic set
<u>2 3 5 7 11</u> harmonic set	<u>2̄ 3̄ 5̄ 7̄ 11̄</u>	
2 3		5̄ 7̄ 11̄
2 5	3̄	7̄ 11̄
2 7	3̄ 5̄	11̄
2 11	3̄ 5̄ 7̄	
3 5	2̄	7̄ 11̄
3 7	2̄	11̄
3 11	2̄ 5̄ 7̄	
5 7	2̄ 3̄	11̄
5 11	2̄ 3̄	7̄
7 11	2̄ 3̄ 5̄	

- $\binom{0}{5}$ $\binom{1}{5}$ $\binom{2}{5}$ $\binom{3}{5}$ $\binom{4}{5}$ $\binom{5}{5}$
 1 5 10 10 5 1





Each harmonic tetrad connects with 6 subharmonic tetrads with 2 common tones:

1 3 5 7 Tetrad harmonic

$\bar{3}$ 1 $\bar{9}$ $\bar{11}$

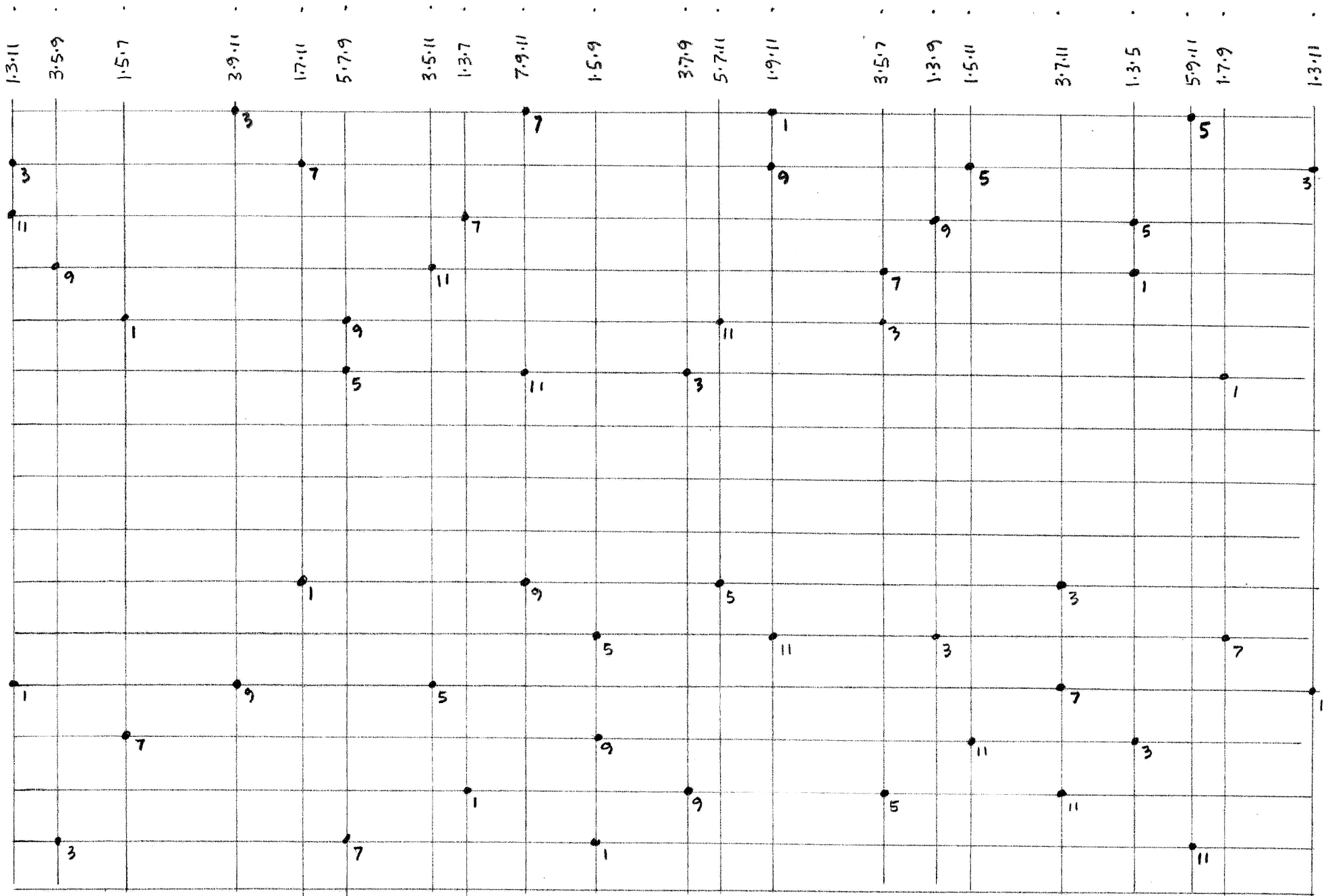
$\bar{5}$ 1 $\bar{9}$ $\bar{11}$

$\bar{7}$ 1 $\bar{9}$ $\bar{11}$

$\bar{5}$ $\bar{3}$ $\bar{9}$ $\bar{11}$

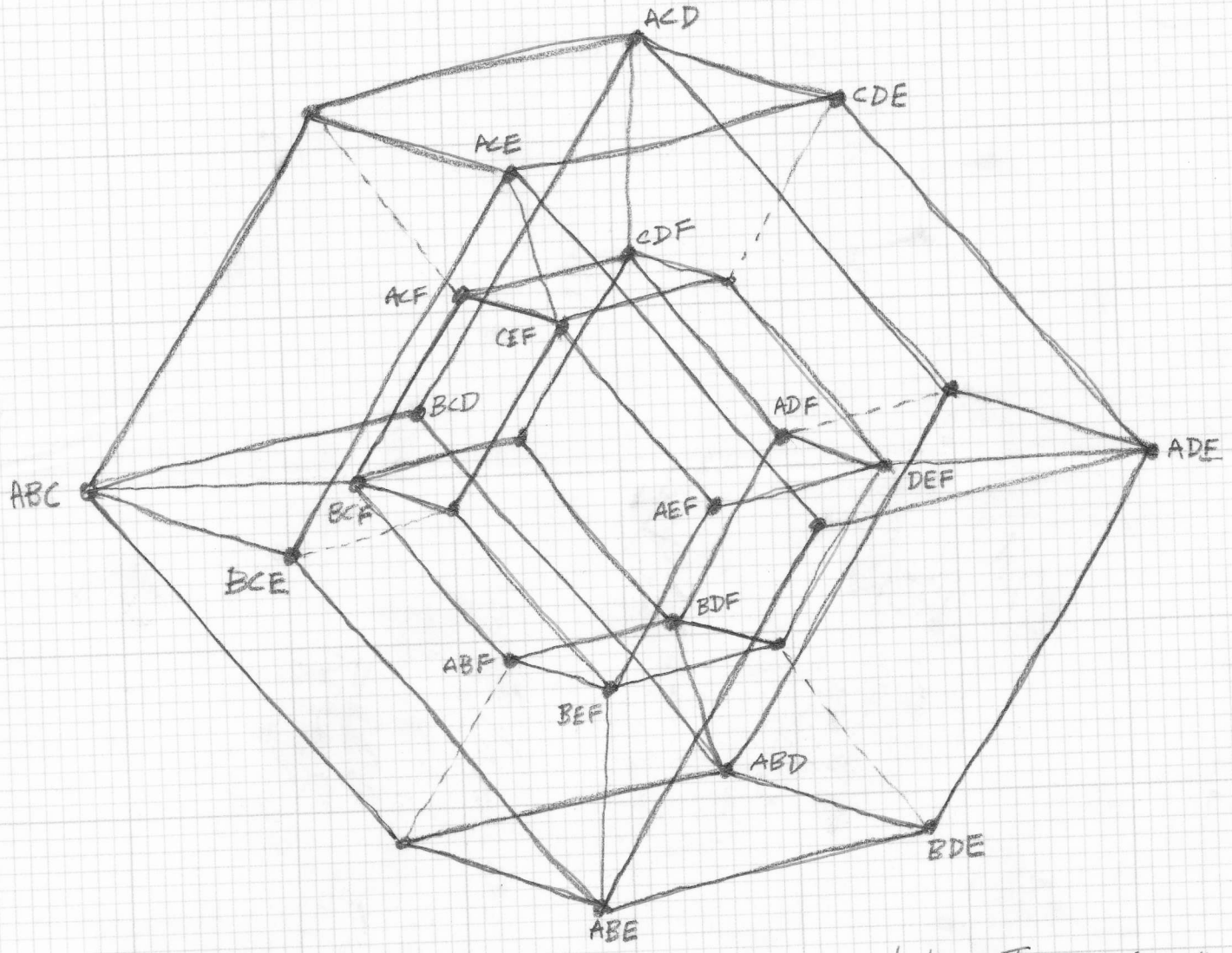
$\bar{7}$ $\bar{3}$ $\bar{9}$ $\bar{11}$

$\bar{7}$ $\bar{5}$ $\bar{9}$ $\bar{11}$



2 cycles of Tetrads © E.W 1981

Tom Smith,



This formal object is known as a crystal. There is a small (red) rhombic dodecahedron inside a large (blue) dodecahedron. The 14 points are connected respectively as shown.

The Eikosony is mapped to the shape using 10 points of the large dodecahedron as shown, and the "mirroring" 10 points of the small dodecahedron. (The 10 points are "dekans" in each case)

yours,

Etu

(In actual space it is a very beautiful object)

~~and may~~