1220.00 **Indigs**

1220.10 **Definition:** All numbers have their own integrity.

1220.11 The name *digit* comes from *finger*. A finger is a digit. There are five fingers on each hand. Two sets of five digits give humans a propensity for counting in increments of 10.

1220.12 Curiosity and practical necessity have brought humans to deal with numbers larger than any familiar quantity immediately available with which to make matching comparison. This frequent occurrence induced brain-plus-mind capabilities to inaugurate ingenious human information-apprehending mathematical stratagems in pure principle. If you are looking at all the pebbles on the beach or all the grains of sand, you have no spontaneous way of immediately quantifying such an experience with discrete number magnitude. Quantitative comprehension requires an integrative strategy with which to reduce methodically large unknown numbers to known numbers by use of obviously well- known and spontaneously employed linear-, area-, volume-, and time-measuring tools.

1220.13 **Indig Table A: Comparative Table of Modular Congruences of Cardinal Numbers:** This is a comparative table of the modular congruences of cardinal- number systems as expressed in Arabic numerals with the individual integer symbols integrated as *indigs*, which discloses synergetic wave-module behaviors inherent in nature's a priori, orderly, integrative effects of progressive powers of interactions of number:

Visually	Nonintegrated	Indigs	Indig
1	1	1	
11	11	2	
1 1 1	111	3	
11 11	1111	4	
11 1 11	11111	5	
111 111	111111	6	
111 1 111	1111111	7	
11 11 11 11	11111111	8	

111 111 111	111111111	9	
two hands	1111111111	10	1
too much	11111111111	11	2

1220.14 Man started counting large numbers which he did not recognize as a discrete and frequently experienced pattern by modularly rhythmic repetitive measuring, or matching, with discrete patterns which he did recognize—as, for instance, by matching the items to be counted one for one with the successive fingers of his two hands. This gave him the number of separate items being considered. Heel-to-toe stepping off of the number; or foot-after-foot length dimensions; or progressively and methodically covering areas with square woven floor mats of standard sizes, as the Japanese *tatami* and *tsubo;* or by successive mouthfuls or handfuls or bowls full, counted on the fingers of his hands, then in multiples of hands (i.e., multiples of ten), gave him commonly satisfactory volume measurements.

1220.15 Most readily humans recognized and trusted one and one making two, or one and two making three, or two and two making four. But an unbounded loose set of 10 irregular and dissimilar somethings was not recognizable by numbers in one glance: it was a lot. Nor are five loose, irregular, and dissimilar somethings recognizable in one glance as a number: they are a bunch. But a human hand is boundaried and finitely recognizable at a single glance as a *hand*, but not as a discrete number except by repetitively acquired confirmation and reflexive conditioning. Five is more recognizable as four fingers and a thumb, or even more readily recognizable as two end fingers (the little and the index), two fingers in the middle, and the thumb (2 + 2 + 1 = 5).

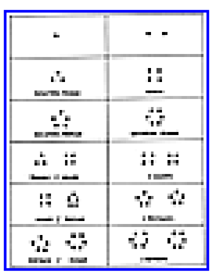
Fig. 1220.16

1220.16 Symmetrical arrays of identically shaped and sized, integrally symmetric objects evoke spontaneous number identification from *one to six*, but not beyond. Paired sets of identities to six are also spontaneously recognized; hence we have dice and dominoes.

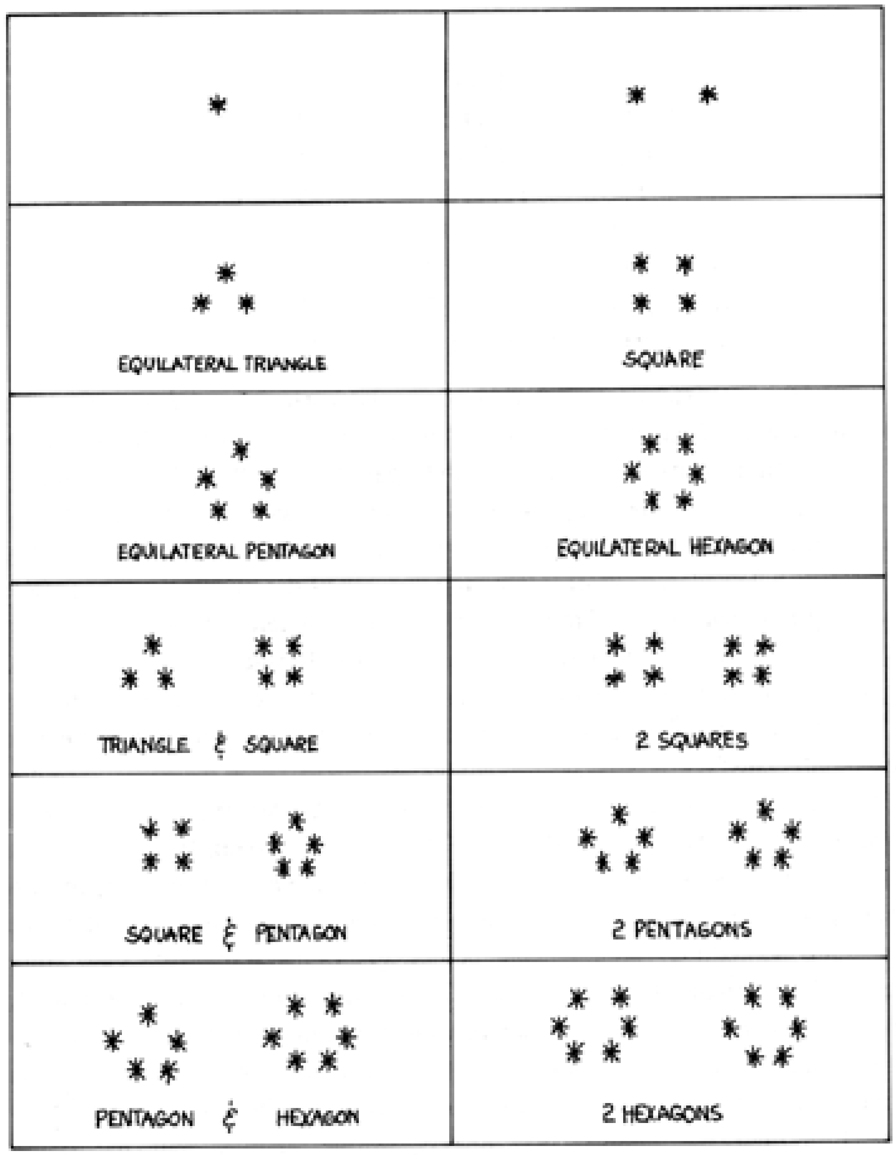
EQUILATERAL TRIANGLE
SQUARE
EQUILATERAL PENTAGON
EQUILATERAL HEXAGON
TRIANGLE & SQUARE
2 SQUARES
SQUARE & PENTAGON
2 PENTAGONS
PENTAGON & HEXAGON
2 HEXAGONS

Fig. 1220.16.

1220.17 Thus humans learned that collections of very large numbers consist of multiples of recognizable numbers, which recognition always goes back sensorially to spontaneously and frequently proven matching correspondence with experientially integrated pattern simplexes. One orange is a point (of focus). Two oranges define a line. Three oranges define an area (a triangle). And four oranges, the fourth nested atop the triangled first three, define a multidimensional volume, a tetrahedron, a scoop, a cup.[1]

(Footnote 1: This may have been the genesis of the cube— where all the trouble began. Why? Because man's tetrahedron scoop wpuld not stand on its point, spilled, frustrated counting, and wasted valuable substances. So humans devised the square-based volume: the cube, which itself became an allspace-filling multiple cube building block easily appraised by "cubing" arithmetic.)

1220.20 **Numerological Correspondence:** Numerologists do not pretend to be scientific. They are just fascinated with a game of correspondence of their "key" digits— finger counts, ergo, 10 digits—with various happenstances of existence. They have great fun identifying the number "seven" or the number "two" types of people with their own ingeniously classified types of humans and types of events, and thereafter imaginatively developing significant insights which from time to time seem justified by subsequent coincidences with reality. What intrigues them is that the numbers themselves are integratable in a methodically reliable way which, though quite mysterious, gives them faithfully predictable results. They feel intuitively confident and powerful because they know vaguely that scientists also have found number integrity exactly manifest in physical laws.

1220.21 The numerologists have also assigned serial numbers to the letters of the alphabet: A is one, B is two, C is three, etc. Because there are many different alphabets of different languages consisting of various quantities of letters, the number assignments would not correspond to the same interpretations in different languages. Numerologists, however, preoccupied only in their single language, wishfully assumed that they could identify characteristics of people by the residual digits corresponding to all the letters in the individual's complete set of names, somewhat as astrologists identify people by the correspondences of their birth dates with the creative picturing constellations of the Milky Way zoo = Zodiac = Celestial Circus of Animals.

1221.00 **Integration of Digits**

1221.10 **Quantifying by Integration:** Early in my life, I became interested in the mathematical potentials latent in the methodology of the numerologists. I found myself increasingly intrigued and continually experimenting with digit integrations. What the numerologist does is to add numbers as expressed horizontally; for instance:

$$120 = 1 + 2 + 0 = 3$$

Or:

$$32986513 = 3+2+9+8+6+5+1+3 = 37 = 3+7 = 10 = 1+0 = 1,$$

Numerologically, 32986513= 1

Or:

59865279171 = 5+9 = 14+8 = 22+6 = 28+5 = 33+2 = 35+7 = 42+9 = 51+1 = 52+7 = 59+1 = 60 = 6+0 = 6,

Numerologically, 59865279171 = 6.

1221.11 Though I was familiar with the methods of the calculus—for instance, quantifying large, irregularly bound areas—explorations in numerology had persuaded me that large numbers themselves, because of the unique intrinsic properties of individual numbers, might be logically integratable to disclose initial simplexes of sensorial interpatterning apprehendibility.

1221.12 Integrating the symbols of the modular increments of counting, in the above case in increments of 10, as expressed in the ten-columnar arrays of progressive residues (less than ten—or less than whatever the module employed may be), until all the columns' separate residues are reduced to one *integral digit*, i.e., an integer that is the ultimate of the numbers that have been integrated. Unity is plural and at minimum two. (See Secs. 240.03; 527.52; and 707.01.)

1221.13 As a measure of communications economy, I soon nicknamed as *indigs* the final unitary reduction of the integrated digits. I use *indig* rather than *integer* to remind us of the process by which ancient mathematicians counting with their fingers (digits) may have come in due course to evolve the term *integer*.

1221.14 I next undertook the indigging of all the successive modular congruence systems ranging from one-by-one, two-by-two pairs to "by the dozens," i.e., from zero through 12. (See modulo-congruence tables, Sec. 1221.20.)

1221.15 The modulo-congruence tables are expressed in both *decimal* and *indig* terms. In each of the 13 tables of the chart, the little superscripts are the indigs of their adjacently below, decimally expressed, corresponding integers.

1221.16 The number of separate columns of the systematically displayed tables corresponds with the modulo-congruence system employed. Inspection of successive horizontal lines discloses the orderly indig amplifying or diminishing effects produced upon arithmetical integer progression. The result is startling.

1221.17 Looking at the chart, we see that when we integrate digits, certain integers invariably produce discretely amplifying or diminishing alterative effects upon other integers.

One produces a plus oneness;

Two produces a plus twoness;

Three produces a plus threeness;

Four produces a plus fourness.

Whereafter we reverse,

Five produces a minus fourness;

Six produces a minus threeness;

Seven produces a minus twoness;

Eight produces a minus oneness.

Nine produces zero plusness or minusness.

One and ten are the same. Ten indigs (indig = verb intransitive) as a *one* and produces the same alterative effects as does one. Eleven indigs as two and produces the same alterative effects as a two. All the other whole numbers of any size indig to 1, 2, 3, 4, S, 6, 7, 8, or 9—ergo, have the plus or minus oneness to fourness or zeroness alterative effects on all other integers.

1221.18 Since the Arabic numerals have been employed by the Western world almost exclusively as congruence in modulo ten, and the whole world's scientific, political, and economic bodies have adopted the metric system, and the notation emulating the abacus operation arbitrarily adds an additional symbol column unilaterally (to the left) for each power of ten attained by a given operation, it is reasonable to integrate the separate integers into one integer for each multisymboled number. Thus 12, which consists of 1 + 2, = 3; and speaking numerologically, 3925867 = 4.

1	=	+1	+1	
2	=	+2	+2	
3	=	+3	+3	
4	=	+4	+4	+
5	=	5	−4	
6	=	6	−3	
7	=	7	−2	
8	=	8	−1	
9	=	0	0	
10	=	1	+1	
11	=	2	+2	
12	=	3	+3	
13	=	4	+4	−
14	=	5	−4	
15	=	6	−3	
16	=	7	−2	
17	=	8	−1	
18	=	0	0	
19	=	1	+1	
20	=	2	+2	

This provides an octave number system of a plus and minus octave and an (outside-out) and an (indise-out) differentiation, for every system has insideness (concave) and outsideness (convex) as well as two polar hemisystems.

1221.20 **Indig Table B: Modulo-Congruence Tables:** The effects of integers: One is + 1. Two is + 2. Three is + 3. Four is +4. Five is - 4. Six is - 3. Seven is - 2. Eight is -1. Nine is zero; nine is none.
(The superior figures in the Table are the *Indigs.*)

Congruence in Modulo Zero Integrates to Gain or Lose 0:

0 (Like nine) **0**

Congruence in Modulo One Integrates to Gain 1:

1^1	(Each row gains 1
2^2	in each column)
3^3	
4^4	
5^5	**+1**
6^6	
7^7	
8^8	
9^9	
10^1	
11^2	
12^3	

Congruence in Modulo Two Integrates to Gain 2:

1^1	2^2	(Each row gains 2
3^3	4^4	in each column)
5^5	6^6	
7^7	8^8	
9^9	10^1	**+2**
11^2	12^3	
13^4	14^5	
15^6	16^7	

Congruence in Modulo Two Integrates to Gain 3:

1^1	2^2	3^3	(Each row gains 3
4^4	5^5	6^6	in each column
7^7	8^8	9^9	
10^1	11^2	12^3	**+3**
13^4	14^5	15^6	
16^7	17^8	18^9	
19^1	20^2	21^3	

Congruence in Modulo Four Integrates to Gain 4:

1^1	2^2	3^3	4^4	(Each row gains 4
5^5	6^6	7^7	8^8	in each column
9^9	10^1	11^2	12^3	
13^4	14^5	15^6	16^7	**+4**
17^8	18^9	19^1	20^2	
21^3	22^4	23^5	24^6	

Congruence in Modulo Five Integrates to Lose 4:

1^1	2^2	3^3	4^4	5^5	(Each row loses 4
6^6	7^7	8^8	9^9	10^1	in each column
11^2	12^3	13^4	14^5	15^6	
16^7	17^8	18^9	19^1	20^2	**-4**
21^3	22^4	23^5	24^6	25^7	
26^8	27^9	28^1	29^2	30^3	

Congruence in Modulo Six Integrates to Lose 3:

1^1	2^2	3^3	4^4	5^5	6^6	(Each row loses 3
7^7	8^8	9^9	10^1	11^2	12^3	in each column
13^4	14^5	15^6	16^7	17^8	18^9	
19^1	20^2	21^3	22^4	23^5	24^6	**-3**
25^7	26^8	27^9	28^1	29^2	30^3	

Congruence in Modulo Seven Integrates to Lose 2:

1^1	2^2	3^3	4^4	5^5	6^6	7^7	(Each row loses 2
8^8	9^9	10^1	11^2	12^3	13^4	14^5	in each column
15^6	16^7	17^8	18^9	19^1	20^2	21^3	
22^4	23^5	24^6	25^7	26^8	27^9	28^1	**-2**

Congruence in Modulo Eight Integrates to Lose 1:

1^1	2^2	3^3	4^4	5^5	6^6	7^7	8^8	(Each row loses 1
9^9	10^1	11^2	12^3	13^4	14^5	15^6	16^7	in each column)
17^8	18^9	19^1	20^2	21^3	22^4	23^5	24^6	
25^7	26^8	27^9	28^1	29^2	30^3	31^4	32^5	**-1**

Congruence in Modulo Nine Integrates to No Lose or Gain:

1^1	2^2	3^3	4^4	5^5	6^6	7^7	8^8	9^9	(Each row remains
10^1	11^2	12^3	13^4	14^5	15^6	16^7	17^8	18^9	same value in its
19^1	20^2	21^3	22^4	23^5	24^6	25^7	26^8	27^9	column)
28^1	29^2	30^3	31^4	32^5	33^6	34^7	35^8	36^9	**0**

Congruence in Modulo Ten Integrates to Gain 1:

1^1	2^2	3^3	4^4	5^5	6^6	7^7	8^8	9^9	10^1	(Each row gains 1
11^2	12^3	13^4	14^5	15^6	16^7	17^8	18^9	19^1	20^2	in each column)
21^3	22^4	23^5	24^6	25^7	26^8	27^9	28^1	29^2	30^3	
31^4	32^5	33^6	34^7	35^8	36^9	37^1	38^1	39^3	40^4	**+1**

Congruence in Modulo Eleven Integrates to Gain 2:

1^1	2^2	3^3	4^4	5^5	6^6	7^7	8^8	9^9	10^1	11^2	(Each row gains 2
12^3	13^4	14^5	15^6	16^7	17^8	18^9	19^1	20^2	21^3	22^4	in each column)
23^5	24^6	25^7	26^8	27^9	28^1	29^2	30^3	31^4	32^5	33^6	
34^7	35^8	36^9	37^1	38^2	39^3	40^4	41^5	42^6	43^7	44^8	**+2**

Congruence in Modulo Eleven Integrates to Gain 3:

1^1	2^2	3^3	4^4	5^5	6^6	7^7	8^8	9^9	10^1	11^2	12^3	(Each row gains 3
13^4	14^5	15^6	16^7	17^8	18^9	19^1	20^2	21^3	22^4	23^5	24^6	in each column)
25^7	26^8	27^9	28^1	29^2	30^3	31^4	32^5	33^6	34^7	35^8	36^9	
37^1	38^2	39^3	40^4	41^5	42^6	43^7	44^8	45^9	46^1	47^2	48^3	**+3**

Next Section: 1222.00