

1222.00 Absolute Four and Octave Wave

1222.10 **Prime Dichotomy:** It is found that all decimally expressed whole numbers integrate into only nine digits. Looking at the charts (Indig Table B), we see the nine indigs resultant to the decimal system, or congruence in modulo ten, have integrated further to disclose only nine unique operational effects upon all other integers. These nine interoperational effects in turn reduce into only eight other integer-magnitude-altering effects and one no-magnitude-altering effect. The "octave" of eight magnitude-altering sets of indigs in turn disclose primary dichotomy into four positively altering and four negatively altering magnitude operators, with each set arranged in absolute arithmetical sequence of from one to four only.

1222.11 Indig congruences demonstrate that nine is zero and that number system is inherently octave and corresponds to the four positive and four negative octants of the two polar domains (*obverse* and *reverse*) of the octahedron—and of all systems—which systematic polyhedral octantation limits also govern the eight 45-degree-angle constituent limits of 360-degree unity in the trigonometric function calculations.

1222.12 The inherent $+4, -4, 0, +4, -4, 0 \rightarrow$ of number also corresponds (a) to the four varisized spheres integrating tritangentially to form the tetrahedron (see Sec. [1222.20](#)) and (b) to the octantation of the Coupler (see Sec. [954.20](#)) by its eight allspace-filling Mites (AAB Modules) which, being inherently plus-or-minus biased, though superficially invariant (i.e., are conformationally identical); altogether provide lucidly synergetic integration (at a kindergarten-comprehensible level) of cosmically basic number behavior, quantum mechanics, synergetics, nuclear physics, wave phenomena in general, and topologically rational accountability of experience in general.

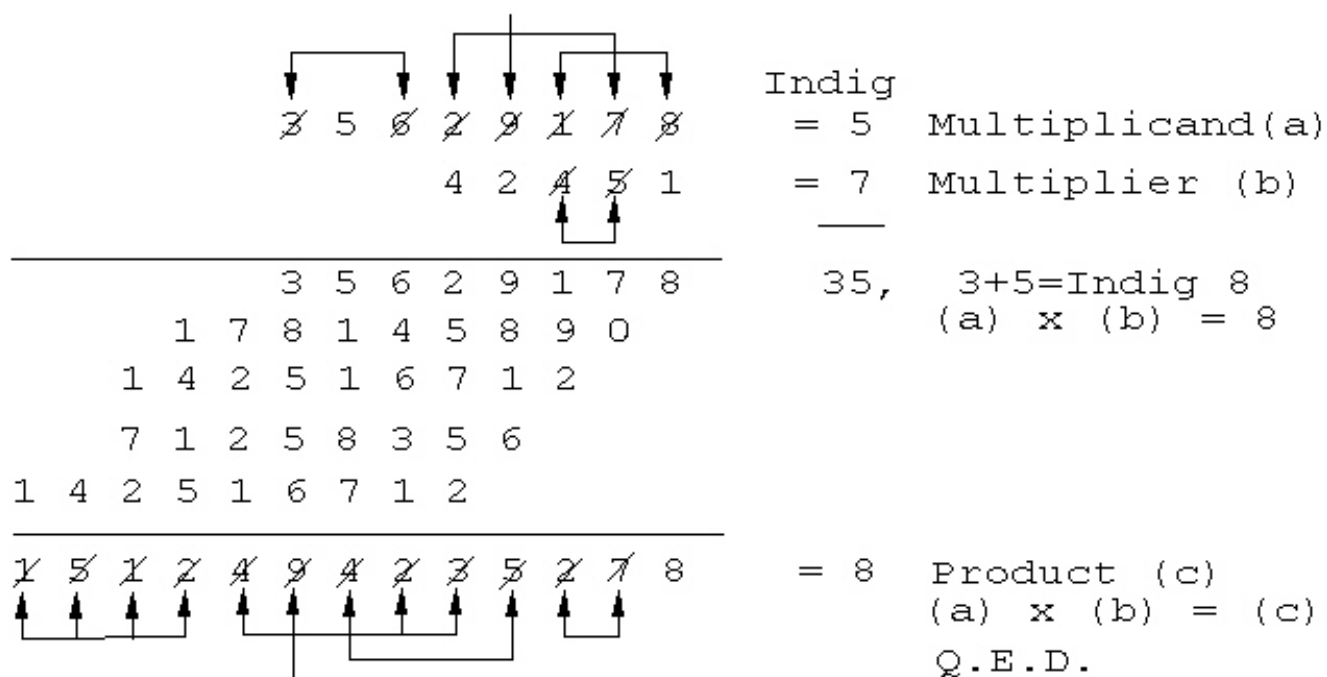
1222.20 **Cosmically Absolute Numbers:** There are apparently no cosmically absolute numbers other than 1, 2, 3, and 4. This primitive founess identifies exactly with one quantum of energy and with the founess of the tetrahedron's primitive structuring as constituting the "prime structural system of Universe," i.e., as the minimum omnitriangulated differentiator of Universe into insideness and outsideness, which alone, of all macro-micro Universe differentiators, pulsates inside-outingly and vice versa as instigated by only one force vector impinging upon it. (See Sec. [624](#).)

1222.30 **Casting Out Nines:** We can use any congruence we like, and the pattern will be the same. The wave phenomenon, increasing by four and decreasing by four, is an octave beginning and ending at zero. From this I saw that nine is zero.

1222.31 When I worked for Armour and Company before World War I, I had to add and multiply enormous columns of figures every day. As yet, neither commercially available adding machines nor electric calculators existed. The auditors showed us how to check our multiplications by "casting out nines." This is done by inspecting all the *input* integers of multiplication, first crossing out any nines and then crossing out any combinations of integers that add to nine, exclusively *within* either the (a) multiplicands, (b) multipliers, or (c) products of multiplication, taken separately. This means we do not take combinations of integers occurring in other than their own respective (a), (b), or (c) sets of integers that add up to nine.

1222.32

(a) Multiplier	Cross out all nines,
(b) \times Multiplicand	or any set of integers
-----	adding to nine, in any
(c) Product	one of either the
	multiplier (a), the
	multiplicand (b), or
	the product (c).



1223.00 Wave Pulsation of Indigs

1223.10 **Pulsative Octave:** The interaction of all numbers other than nine creates the wave phenomenon described, i.e., the self-invertible, self-inside-outable octave increasing and decreasing pulsatively, fourfoldedly, and tetrahedrally. No matter how complex a number-aggregating sequence of events and conditions may be, this same number behavior phenomenon is all that ever happens. There is thus a primitively comprehensive, isotropically distributive, carrier-wave order omniaccommodatively permeating and embracing all phenomena. (See Sec. [1012.10](#))

1223.11 As the nine columns of Indig Table 2 show, I have integrated the digits of all the different multiplication systems and have always found the positively-negatively pulsative, octave, zero-nine-intervaled, ergo interference-free, carrier-wave pattern to be permeating all of them in four alternative interger-mix sequences; with again, four positively ordered and four negatively ordered sequence sets, all octavely ventilated by zero nines cyclically, ergo inherently, ergo eternally synchronized to non-inter- interferences.

1223.12 As will also be seen in Indig Table 2, the integer carrier waves can pulse in single sets, as in Columns 1 and 8; in double pairs, as in Columns 4 and 5; in triple triplets, as in Columns 3 and 6; and in double quadruplets, as in Columns 2 and 7—always octavely interspersed with zeros and, in the case of Columns 3 and 6, interspersed with zeros triangularly as well as octavely. This also means that the omnidirectional wave interpermutatings are accommodated as points or as lines; or as triangular areas; or as tetrahedral volumes—both positive and negative.

1223.13 Thus we are informed that the carrier waves and their internal-external zero intervalling are congruent with the omnitriangulated, tetraplaned, four-dimensional vector equilibria and the omniregenerative isotropic matrix whose univectorings accommodate any wavelength or frequency multiplying in respect to any convergently-divergently nuclear system loci of Universe.



Fig. 1223.12

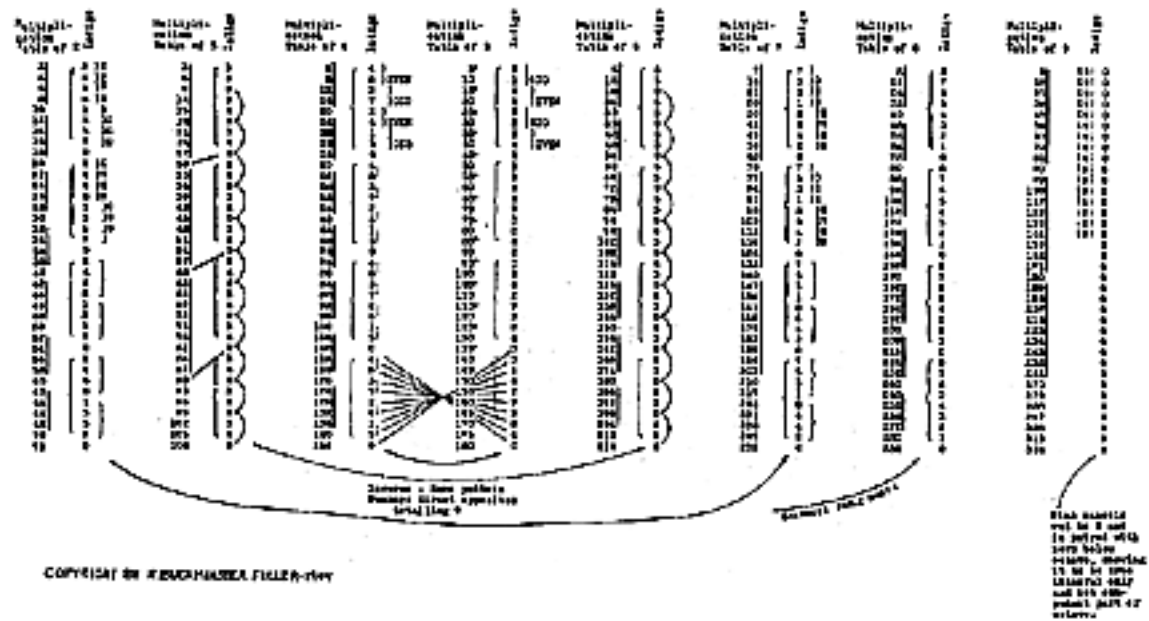


Fig. 1223.12c.

[Click To Zoom In](#)

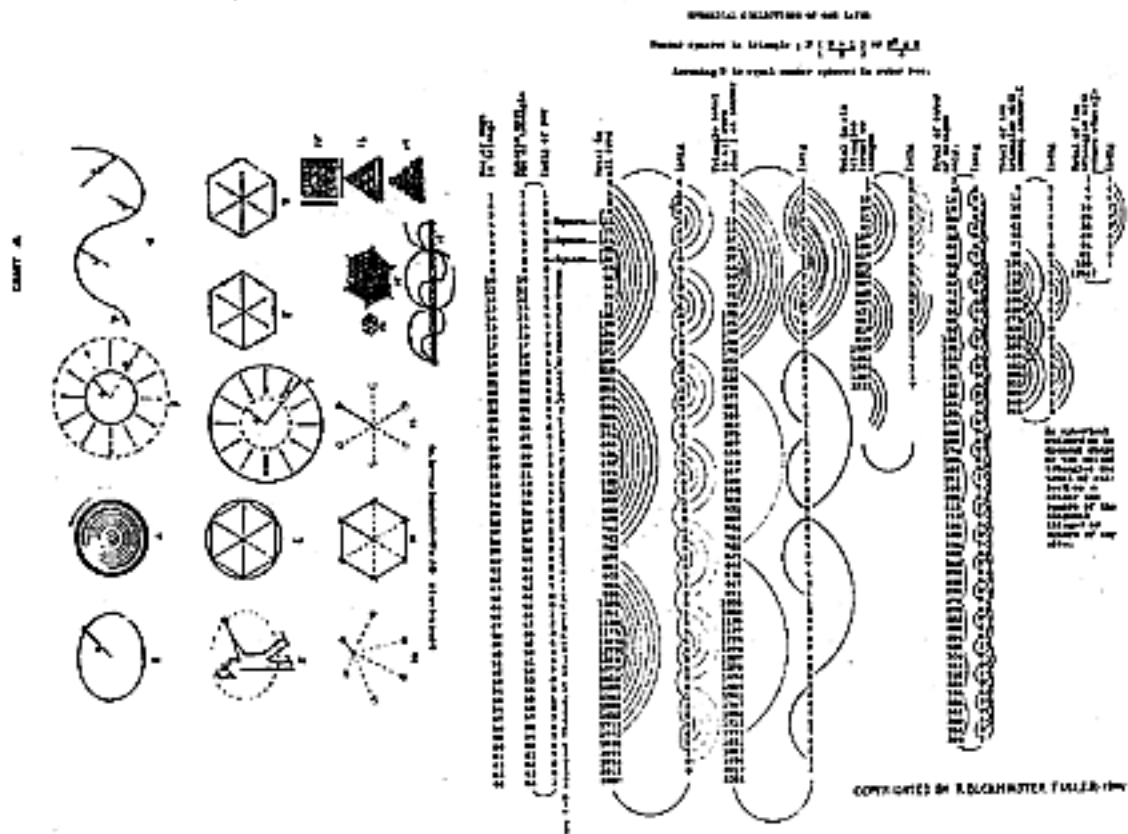


Fig. 1223.12d.

[Click To Zoom In](#)

1223.14 Not only is there an external zero intervallling between all the unique octave- patterning sets in every one of the four positive, four negative systems manifest, but we find also the wave-intermodulating indigs *within* each octave always integrating sum- totally internally to the octaves themselves as *nines*, which is again an internal zero content—this produces in effect a positive zero function vs. a negative zero function, i.e., an inside-out and outside-out zero as the ultracosmic zero-wave pulsativeness.²

(Footnote 2: See Sec. 1012, which describes a closest-sphere-packing model of the same phenomenon. If we make an X configuration with one ball in the center common to both triangles of the X, the ball at the intersection common to both represents the zero—or the place where the waves can pass through each other. The zero always accomodates when two waves come together. We know that atoms close-pack in this manner, and we know how wave phenomena such as radio waves behave. And now we have a model to explain how they do not interfere.)

1223.15 Thus we discover the *modus operandi* by which radio waves and other waves pass uninterferingly through seeming solids, which are themselves only wave complexes. The lack of interference is explained by the crossing of the high-frequency waves through the much lower-frequency waves at the noninterfering zero points, or indeed by the varifrequencied waves through both one another's internal and external zero intervals. (See Illus. [1012.13A and B](#).)

1223.16 If the readers would like to do some of their own indig exploration they may be instructively intrigued by taking a book of mathematical tables and turning to the table of second powers of integers. If they undertake to indig each of those successively listed second-power numbers they will discover that, for the first 100 numbers listed, a unique sequence of 24 integers will appear that peaks at 25, reverses itself, and bottoms at one, only to turn again and peak at 50, bottom at 75, and peak again at the 100th number which, when analyzed, manifests a $2 \times 2 \times 2 = 8 = 2^3 \times 3 = 24$ four-dimensional wave. This four-dimensional wave is only comprehensible when we discover (see Sec. [982.62](#)) the three-frequency reality of $F^3 \times 2^{1/2}$, 3, 4, 5, 6, the a priori, initially-volumed, ergo three-dimensional reality multiplied by the third power of omnidirectional growth rate.

1224.00 **Wave Pulsation of Number 24**

1224.10 **Vector Equilibrium and Octave Wave**

1224.11 The second powering of numbers apparently involves a 24-positive and 24- negative resonance phasing. The potential variables of the indigs of the second-powering of the 24 successive integers running between 0 and 25, and indigs of the 24 integers descending successively between 25 and 50, and repeating the 24 integers between 50 and 75, and the 24 integers between 75 and 100 ad infinitum, apparently account for all the equilibrrious-disequilibrrious, radiational-gravitational, convergent-divergent, curviwavilinear behaviors in respect to the vector equilibrium as well as for the unique rates of growth or contraction of closest-packed-spherical agglomerating.

1224.12 In respect to the progressive series of n^2 product numbers as expressed in congruence-in-modulo- 10, a unique 24-integer series of terminal, submodulus-10, excess integers completes its series direction with 24 and makes its verse-and-reverse series at the common hinges of 25^2 , 75^2 , 100^2 in increments of +24, -24, +24, -24, or in a positively occurring, three-octave-wave increment sequence followed each time by a reversely occurring, three-octave-wave, unique harmonic theme.

1224.13 The three-octave, 24-integer series is manifest in the convergent-divergent, tetrahedral wave propagations of the vector equilibrium wherein the eight tetrahedra share their nuclear sphere and then share their common apex spheres as they embrace that nuclear sphere by expanding in successive triangular closest-packed sphere layers. (Compare Secs. [1012.11](#) and [1033.030](#).)

1224.14 The lines omniinterconnecting the sphere centers of those successively embracing layers produce equiangular triangles, or electromagnetic fields, the sum of whose areas in each successive layer is always n^2 of the number in each series in that layer. In contradistinction to the triangular field, in the series of triangularly closest-packed sphere layers, every two adjacent layers' series produces the next greater n^2 number of spheres, with the number of closest-packed sphere triangles in the waxing and waning phases of the series being governed by the frequency of the wave propagation elected for consideration in each instant.

1224.20 **Recapitulation**

1224.21 The interwave and intervolumetric behavior of the number 24 may be considered variously as follows:

- 24 A Quanta Modules per regular tetrahedron: (Tables [223.64](#) and [943.00](#); Secs. [910.11](#) and [942.10](#))
- 24 modules of regular tetrahedron as cosmic bridge between equilibrious prime number one of metaphysics and disequilibrious prime number one of physical reality (Sec. [954.51](#))
- B Quanta Modules per Coupler (asymmetric octahedron): (Table [223.64](#); Secs. [954.10](#), [954.21](#), and [954.46](#))
- 24 subparticle differentiabilitys of the Coupler to provide for the 2, 3, 4, 6 combinations of proton-neutron intertransformabilities and isotopic variations: (Sec. [954.22](#))
- 24 positive and negative basic triangles (basic equilibrium 48 LCD triangles) defined by the 25 great circles of the vector equilibrium: (Secs. [453.01](#) and [1052.30](#))
- 24 total exterior vertexes of the vector equilibrium paired to produce 12 congruent, univalent external vertexes and to describe the eight tetrahedra, all of which share a common nuclear point to function in octavalent congruence as nuclear circuitry: (Secs. [1012.11](#) and [1033.030](#))
- 24 positively integrated vectors as the implosive, external, circumferentially embracing set of the four great circles of the vector equilibrium and the 24 negatively disintegrative, internal, radially explosive set, with both sets paired at the 12 vertexes: Secs. [450.11](#), [537.131](#), [615.06](#), [905.55](#), [955.02](#), [1011.40](#), and [1052.30](#))
- 24 interior and exterior A Quanta Modules of the isosceles dodecahedron: (Table [943.00](#))
- 24 A-and-B-Quanta-Module-volume of the nucleus-embracing cube formed by applying the eight Eighth-Octahedra to the eight triangular facets of the vector equilibrium: Secs. [905.44](#) and [982.62](#))
- 24 spherical right triangles of the spherical tetrahedron's three-way great-circle grid: (Sec. [905.51](#))
- 24 highest common multiple of regular-tetrahedral-volume values of all congruently symmetric polyhedra of the hierarchy of concentric, symmetrical, rationally volumed geometries occurring within the isotropic vector matrix: (Sec. [982.70](#))
- 24 integer series of alternately convergent-divergent sequences with 24 unique terminal suffix excesses—in respect to the series of n^2 numbers as expressed by congruence in modulo-10—which series peaks at 24 and commonly hinges at 25 to reverse descendingly again to hinge at 50 and then ascends to peak again to hinge at 75 and repeats, in this unique, three-octave, convergent-divergent, wave pulsating- propagating of harmonic themes mutingly inflected at the 25th hinge: (Sec. [1223.16](#))
- The 24 A or B Quanta Modules per 120 basic disequilibrium LCD triangles: (sec. [1053.36](#))
- The inherent subdivision of any tetrahedron, regular or irregular, into 24 equal modules: Sec. [961.44](#))
- The cosmic hierarchy limit of 24 active tetravolumes per each sphere-into-space and each space-into-sphere intertransforming of the complex of jitterbugs: (Sec. [1033.20](#))
- The 24 S Quanta Modules of the icosi-octa interrelationship within the four- frequency tetrahedron: (Sec. [988](#))
- The five sets of 24 each of the T or E Quanta Modules of the rhombic triacontahedron.

1224.30 Turnaround Terminals

1224.31 The powerful 24-ness number behavior with its great-circle congruences and three-octave harmonics may have significant ramifications embracing the unique frequencies of the chemical compoundings as well as the nuclear geometry elucidated elsewhere in this work. (Sec. [1033](#) *passim*.) The terminal-suffix excess integers of the series of second powers of numbers as expressed in congruence in modulo-10 displays the sequence of uniquely aberrating eccentricities in respect to the whole 24-integer phrases.

1224.32 The large figure "2" in the last column of the Indig Table (Fig. [1223.12B](#)) shows that the terminal digits of the second powers of numbers turn around at the middling number 25.

1224.33 There are 24 positive and 24 negative unique numbers that reverse themselves between 0 and 50. This reflects three positive and three negative octaves with turnaround terminal zero accommodation.

1224.34 The "square" identifies that number of energy units occurring in the outer shell of all nuclear phenomena with the second-powering characteristic being that of both the gravitation and the radiational constant's surface growth.

1230.00 Scheherazade Numbers

1230.10 Prime-Number Accommodation: Integration of Seven: The Babylonians did not accommodate a prime number like 7 in their mathematics. Plato had apparently been excited by this deficiency, so he multiplied 360 by 7 and obtained 2,520. And then, seeing that there were always positives and negatives, he multiplied 2,520 by 2 and obtained 5,040. Plato apparently intuited the significance of the number 5,040, but he did not say why he did. I am sure he was trying to integrate 7 to evolve a comprehensively rational circular dividend.

1230.11 H₂O is a simple low number. As both chemistry and quantum physics show, nature does all her associating and disassociating in whole rational numbers. Humans accommodated the primes 1, 2, 3, and 5 in the decimal and duodecimal systems. But they left out 7. After 7, the next two primes are 11 and 13. Humans' superstition considers the numbers 7, 11, and 13 to be bad luck. In playing dice, 7 and 11 are "crapping" or drop-out numbers. And 13 is awful. But so long as the comprehensive cyclic dividend fails to contain prime numbers which may occur in the data to be coped with, irrational numbers will build up or erode the processing numbers to produce irrational, ergo unnatural, results. We must therefore realize that the tables of the trigonometric functions include the first 15 primes 1, 2, 3, 5, 7, 11, 13, 17, 19, 23, 29, 31, 41, 43.

1230.12 We know 7×11 is 77. If we multiply 77 by 13, we get 1,001. Were there not 1,001 Tales of the Arabian Nights? We find these numbers always involved with the mystical. The number 1,001 majors in the name of the storytelling done by Scheherazade to postpone her death in the *Thousand and One Nights*. The number 1,001 is a binomial reflection pattern: one, zero, zero, one.

1230.20 **SSRCD Numbers:** If we multiply the first four primes, we get 30. If we multiply 30 times 7, 11, and 13, we have $30 \times 1,001$ or 30,030, and we have used the first seven primes.

1230.21 We can be intuitive about the eighth prime since the octave seems to be so important. The eighth prime is 17, and if we multiply 30,030 by 17, we arrive at a fantastically simple number: 510,510. This is what I call an SSRCD Number, which stands for *Scheherazade Sublimely Rememberable Comprehensive Dividend*. As an example we can readily remember the first eight primes factorial—510,510! (Factorial means successively multiplied by themselves, ergo $1 \times 2 \times 3 \times 5 \times 7 \times 11 \times 13 \times 17 = 510,510$.)

1230.30 **Origin of Scheherazade Myth:** I think the Arabian priest-mathematicians and their Indian Ocean navigator ancestors knew that the binomial effect of 1,001 upon the first four prime numbers 1, 2, 3, and 5 did indeed provide comprehensive dividend accommodation of all the permutative possibilities of all the "story-telling-taling-tallying," or computational systems of the octave system of integers.

1230.31 The function of the grand vizier to the ruler was that of mathematical wizard, the wiz of wiz-dom; and the wiz-ard kept secret to himself the mathematical navigational ability to go to faraway strange places where he alone knew there existed physical resources different from any of those occurring "at home," then voyaging to places that only the navigator-priest knew how to reach, he was able to bring back guaranteed strange objects that were exhibited by the ruler to his people as miracles obviously producible only by the ruler who secretly and carefully guarded his vizier's miraculous power of wiz-dom.

1230.32 To guarantee their own security and advantage, the Mesopotamian mathematicians, who were the overland-and-overseas navigator-priests, deliberately hid their knowledge, their mathematical tools and operational principles such as the mathematical significance of $7 \times 11 \times 13 = 1,001$ from both their rulers and the people. They used psychology as well as outright lies, combining the bad-luck myth of the three prime integers with the mysterious inclusiveness of the *Thousand and One Nights*. The priests warned that bad luck would befall anyone caught using 7s, 11s, or 13s.

1230.33 Some calculation could only be done by the abacus or by positioning numbers. With almost no one other than the high priests able to do any calculation, there was not much chance that anyone would discover that the product of 7, 11, and 13 is 001, but "just in case," they developed the diverting myth of Scheherazade and her postponement of execution by her *Thousand and One Nights*.

Next Section: 1231.00
