NUMERICAL CONSPIRACY THEORIES, COINCIDENCES, CURIOSITIES

CURIOSITIES

What is here called a curiosity may be an improbable "black swan", be an example of Jung's synchronicity, or be just a coincidence. However, Aristotle–Newton Inc, demand all such be exiled from the domain of possibility and verboten in scientific discourse. They admonish that pursuit of curiosities leads nowhere and is an utter waste of time. But their position infers that curiosities and coincidences are seen as a threat to their party-line: a threat to certitude, a threat to universality, and a threat to any "Theory of Everything". So the party-line's hostility to "will-o-the wisps" [their label] is readily explicable.

CONSPIRACY THEORIES

A conspiracy theory is not a valid theory, it is a quasi pre-theory. As such it lacks sufficient evidence to be accepted as possibility. On the other hand, there is insufficient evidence for it to be falsified and declared an impossibility. Hence conspiracy theories live in a twilight zone between the possible and the impossible. Nonetheless, they remain *candidates* for the status of theory.

NUMBERS AND NUMEROLOGY

Most of the curiosities and conspiracies considered here are of a numerical nature. And by numerical is meant the purely *quantitative* aspects of number, not the qualitative or metaphysical aspects ascribed to numbers by numerology. [eg Seven is Sacred]
In comparing numbers strict attention must be paid to units, dimensionality, accuracy, and precision, but not to "making sense". For sometimes nonsense can be profound sense.

> Mr. Berra, how would you like your pizza sliced,
> into four slices or eight?
> You had better make it four, I don't think I can eat
> eight.

But Yogi Berra is making good sense if the pizza is a symbol for a menu of four rs or eight options. [Most of us can't handle four options much less eight. We like just two, such as DEMS or GOPs]

Numerical manipulations, such as adopting different and varying definitions of the cubit in interpreting the measurements of the Great Pyramid reduces the numerical to the numerological. Units and dimensions must be standardized in every comparison. and best, reduced to pure number.

What is a curiosity?

Something that intrigues because its seems to be a part of something bigger — a part with insufficient clues to its whole.

It may be intriguing — because it is like something more familiar and more substantial — but not like enough to "fit".

It may belong to the species of rare events — i.e. occur rarely and irregularly in our common span of "NOW"

But there may be enough of these curiosities — that they too have "self-organized" into a whole that lies beyond our sensory apparati, our modes of inference and our ability to supply a connection.

Our usual mode of connection is spatial contiguity and temporal continuity. The non-contiguous that is connected [action at a distance, non-locality,] {e.g. archetypes} baffles us. We tend to discard such items - events

Non Continuum
Kairos, Archetypes

Non Contiguity
Temenos, Feng Shui

Belonging to a same set — is a generalization allowing connection beyond the linear parameters of contiguity and continuity

We seek other linear parameter or make sets

07
03
20

∴ The set of curiosities

Those items whose commonality is uncommon whose connection is unconnectability

Interesting patterns per se — but seemingly meaningless in a larger context

stones too irregular for building with — but still interesting — no building use for them — but attractive in a Zen Garden

THEORIES vs CONSPIRACY THEORIES

Curiosities are related to conspiracy theories

- when there is secrecy - or missing piece

We build not theories - from sensed form

but conspiracy them - making up needed pieces

Isolated or Island pattern

Ostrow

The Links in The 4 WORLDS

Contiguity space

Continuity time Fitting

Consistency ⇒

The 4th or contextual world

is a nebulous, random, MYSTERY

Beyond space, time, consistency

logic

Beyond speculation - even beyond imagination

IG P aspects beyond science fiction

B aspect

Semiotically unsullied

i.e. ∄ words or symbols

grammars or rules

glimpsed as beauty, euphoria, absurdity,

laughter, tears

Opens us to its openness

its ∞ potential

Hypotheses: ~~w~~ Conspiracy Theories

" There are two possible outcomes:
If the result confirms the hypothesis, then you have made a measurement.
If the result is contrary to the hypothesis, then you have made a discovery.
- Enrico Fermi (1901- 1954)

Hypotheses
Confirm rules ~~w~~ or break rules

Aristotle; Law of the EXCLUDED MIDDLE: LXM: A hypothesis proposition is True of False

A conspiracy theory occupies the "no-mans land" between being a hypothesis - i.e being testable and not testable. It lacks sufficience definiteness to be testable, but has enough "could be" to not throw it away.

A conspiracy theory cannot be said to be true or false {cf. Pauli's "not even wrong"}

It lacks testability. with certain additions it can become testable
or sharpening
(more significant figures)

A conspiracy theory lacks the sufficiency to break a rule or obey a rule

Most theoretical inhabitants of "no man's land" can be assigned a probability of T or F
Conspiracy Theories are beyond assignment of a probability

False! | limbo | true | absolutely certain!
% prob

A conspiracy Theory May or does contain an <u>unknowable</u> component
(secrecy?)

All cosmological theories are conspiracy theories
All theological systems are conspiracy theories

Synchronicity
Coincidence
Curiosity

But Conspiracy Theories have one definite value:
They are Rorschach Tests

WISDOM
of the
ANCIENTS

NATURAL NUMBERS and
NATURE'S NUMBERS

Φ, ϕ

$G, c, \hbar$

N_A Avogadro's Number

$m_p, m_e, \alpha\ \mu$ $\quad S = \alpha\mu$ $\quad S = \alpha^{23}\mu^{-3}$

$S = 39.355471115$

$r_e,$ $\quad \frac{(5+\sqrt{15})^2}{2} \approx 39.36491673$

ℓ

~~√5~~ $5 \pm \sqrt{15}$ $\quad 5-\sqrt{15} = 1.127016654$

$\alpha\mu = 1.127074115$

ℓ

NUMERICAL
COINCIDENCES, CURIOSITIES
AND
CONSPIRACY THEORIES

Numerical Conspiracy Theories

Weapons of Math Deception — Special Relativity
Statistics

Additional circles without π

CHAPTER HEADS

SPIN [ellipsoid]

Add THE SPIN MEISTER's KOAN

Spinning creates reality

4 SMALL DIFFERENCES

1. $(\alpha\mu)^{15/2} = 8.453\ 055\ 855$ [0] $\frac{m_0}{r_e}\frac{1}{(\alpha\mu)^7} = -0.001\ 854\ 387$

$\frac{c^2}{G\sqrt{5}} = 8.451\ 201\ 468$ $\left[\frac{M}{L}\right]$

$\overline{0.001\ 854\ 387}$

---

2. $-N_A = -23.779\ 750\ 603$ [chem wt'?] Avogadro's Number [0]

$m_p = -23.776\ 602\ 304$ [M]

$\overline{0.003\ 148\ 299}$ $\div 3 = 0.001\ 049\ 418$

---

3. $\alpha\mu = 1.127\ 074\ 115$ [0]

$5-\sqrt{15} = 1.127\ 016\ 654$ [0]

$\overline{0.000\ 057\ 461}$

---

4. $8\pi^2 S = 2^{1/\alpha}$ $1/\alpha = 137.035\ 989$

$\log 8\pi^2 S = \frac{1}{\alpha}\log 2$

$\log 8\pi^2 = 1.897\ 389\ 732$ $\frac{1}{\alpha}\log 2 = 41.251\ 943\ 170$ [0]

$\log S = 39.355\ 471\ 115$

$\overline{41.252\ 860\ 847}$ [0]

$41.251\ 943\ 170$

$\overline{0.000\ 917\ 677}$

$8\pi^2 \cdot \text{DIRACS NUMBER} = 2^{\text{~~EDDINGTON'S~~ EDDINGTON'S NUMBER}}$

$$8\pi^2 S = 2^E$$

COSCUR.WPD November 1, 2003

COSMIC CURIOSITIES

1) Archimedes' Sand Reckoner 10^{62} grains of sand vs. Eddington's 10^{78} atoms
TVD
1 gram of sand > 10^{16} atoms?

2) Cylinder–Sphere–Cone Vs Power–Energy–Force
(Alternate symbols for dimensionality)
cyl sph con
$2\pi R^3$ $\frac{4}{3}\pi R^3$ $\frac{2}{3}\pi R^3$

3) Cylinder–Sphere–Cone
V= 3/2 1 1/2
$(\alpha\mu S)^{3/2}$ $(\alpha\mu S)$ $(\alpha\mu S)^{1/2}$
univ star atom

SPIN $\frac{1}{2}, 1, \frac{3}{2}$
Wheel v.c. Kepler ecl

4) Invariant volume of two cones Invariant vs Constant

5) Time:
Period since the Big Bang measured in Kalpas
The week, the Schuster period and the rotation period
Kairos and Kronos, Mayan Haab and Tun (long count), Cyclical and Linear
Logic: Past conjunctive–Present disjunctive–Future neither conjunctive nor disjunctive
Past=fixed zone, Present=choice zone, Future=chance zone
Necessity Options Random Sunyata
The width of "NOW"

6) ISOLATION Conflict–Compromise–Synthesis

7) Continuity–Contiguity–Consistency

8) Repetition–Recursion–Regression [Iteration]

9) Confusion–Conviction–Corruption

10) Symbol–Metaphor–Archetype [Representation]
Nodes–Links, Patterns–Pictures, Processes–Games
SETS

11) Mathematical Musings:
The Great Pyramid $\Phi, \pi, dV/dS = 0$
Fulcrum Numbers

12) Problem levels: Cosmic, Models, Representation, Tools
Nature, Weltanschauung, Language, Software

modulation w exponent
$(\text{White Noise})^2$ = Gausian

Hubble and the Kalpas
# of Stars – Talmud
Celts and Analemma

Great Pyramid: Aphothems and Apothegms

Avagadro and Planck

MAYAN CURIOSITIES:

Synodic	♀	13 × 45	585	actually 584.96
Synodic	♂	13 × 60	780	779.92
Solar	⊕	13 × 28	364	365.25

♀ + ♂ − ⊕ ≐ 1000

1001

THE MAYA WERE PYTHAGOREANS

THE RELATIONS BETWEEN NUMBERS

$$\begin{array}{r} 584.96 \\ 779.92 \\ \hline 1364.88 \\ 365.25 \\ \hline 999.63 \end{array}$$

CUCOCU01.WPD May 30, 2005

CULTURAL AND COSMIC CURIOSITIES and AND NUMERICAL

CURIOUS CALCULATIONS

INJUDICIOUS JUXTAPOSITIONS

CULTURAL
- ZENO: CONTIGUITY AND CONTINUITY

NUMERICAL
- LARGE NUMBERS Googolplex
  - ARCHIMEDES' SAND RECKONER POWERS OF 11 PASCAL Δ
  - LIFE TIME OF BRAHMA
  - POWERS OF TEN googolplex
- OCCULT ~~NUMBERS~~ hierarchical representation of large numbers 2^3^4 ...

MATH as METAPHOR

MATHEMATICAL METAPHORS

The Presidents Pattern

$\boxed{L}$ ...

MATHEMATICAL MUSINGS
- FULCRUM NUMBERS
- SHAPE INDICES
- THE GREAT PYRAMID π, Φ, $dV/dS = 0$, LINE OF APSIDES
- CYLINDER-SPHERE-CONE
- YANGHUI AND FRACTALS
- CUT OFF AT 5 POLYNOMIALS, VENN DIAGRAMS

The Pope as Antichrist

— Lat of Stonehenge 51°

CONTINENTAL DRIFT

M D C L X V I = 1666

OLIVER CROMWELL AS SUPER-ANTICHRIST

CALENDRICAL ANALEMMA + CELTIC YEAR
- YEAR ZERO CHRISTMAS: THE LONGEST DAY
- HINDU: KALPAS AND YUGAS — BIG BANG & KALPAS, PLANCK AGE & Z Brahmas
- MAYAN: HAAB AND TUN (LONG COUNT)
- CELTIC: THE LITURGICAL YEAR AND THE ANALEMMA
- THE WEEK [See N.B. WEEK-CHON]
- CHON [ ]

J of Y Analemma

└ KAIROS and E-W motion of Sun cf. Jet lag and information + forces in Δ frequencies

THE PRESIDENTS

COSMIC
- BODE'S LAW MAYANS
- SHUMAN AND SCHUSTER PERIODS
- THE PLANCK-BARYON CUBE AND EDDINGTON'S NUMBER OF ATOMS
- AVAGADRO'S NUMBER AND BEYOND
- THE FUNDAMENTAL CONSTANTS OF PHYSICS
- NUMERICAL APPROXIMATIONS
- SOURCES OF S AND $(\alpha\mu S)^n$ $S = \alpha^{-23}\mu^{-3}$
  - $A_{n+2} = 10(A_{n+1} - A_n)$
  - (2^3^4)(2^4^3)/(4^3^2) $\frac{(3^2^4)(3^4^2)}{(4^2^3)}$

DIRAC PARADOX

APPROXIMATIONS TO S

Analemma and φ

8
-
-

$\frac{(2^3^4)(3^2^5)}{\alpha} = 39.35028$

39.3502658

NEWG

Δ = 0.005614

4 PLANETS – PROTO-PLANETS

Q = 1.000143

Linguistic Curiosities

Pelee a volcano in the Caribbean

Pele the Hawaiian goddess of volcanos

Arigato Japanese

Abrigado Portuguese

Varracena - Andes, Himalaya

Add Pythagorean Room of Spinning Spheres

Christmas - the longest day

Thai Temples ~~to~~ Stave Kirches

CULTURAL AND

COSMIC CURIOSITIES

NUMBER GAMES
or NUMERICAL
PYTHAGORASYN
PASTTIMES

- ZENO s.
  Saltutory w continuous
- ARCHIMEDES - THE SAND RECKONER 10^{60}
  not salutory
- BODE's LAW TITUS-BODE
- THE SCHUSTER PERIOD $D^3 = S^4$

Numerical Nuances

- $A_{n+2} = 10A_{n+1} - 10A_n$
- YANGHUI + and - cf Fractals
- Numerical approximations
- The re cube ⊃ 10^{60} E

tetrahedron Triangle ~ ☉
Avagadro's Number

- $\dfrac{(2\hat{}3\hat{}4)(2\hat{}4\hat{}3)}{(4\hat{}3\hat{}2)}$ etc
- KULPAS, YUGAS
- INTERPLAY of * and ^ with 2
- THE WEEK - THE MAYANS
- THE GREAT PYRAMID ratios-only [proportions]
- THE LITURGICAL YEAR and the Analemma
- Occult Numbers
- BAKTUN 13.0.0.0.0
- THE FIRST DATES - BISHOP USHER ... BIG BANG ... BRAHMA
-

WISDOM of the Ancients [Sources?] ANCIENT ASTRONAUTS
Playing with numbers : THE # of places game

Numerical Patterns too small to be theories
but too large to be ignored

Einstein's quote

NOT Revitalize "THE NEW AGE"
Harmonic Convergence

WHAT CHARACTERIZES A CURIOSITY?

Template w Theory
Both are collections of facts

Blank Links Blank nodes
Filled in Links Filled in nodes

Species of abstraction what is open
what is constrained
Species of generalization

BUT
NO
BORED WITH
ARITHMETIC
HAVE SOME FUN

~ÿÿÿX□
~ê□
~"*%□

LOGIC
VENN OF

RUMSFELD

ABSENCE OF EVIDENCE IS NOT EVIDEN OF ABSENCE

TURNS OUT → POSSESSION OF EVIDENCE WAS NOT EVIDENCE OF POSSESSION

COSMIC CURIOSITIES

→ COSMIC CONSPIRACIES 05-09-30

Bode's Law One dot too far falsified

many "One bridge too far" link

On the other hand, When there are too few dots [or hidden dots, secrecy]

Conspiracy theories arise

i.e. When an informed pattern may be based on too few dots, and alternative patterns with the same observed dots are possible to the proclaimed or accepted pattern or current

example: Number of significant figures in a measurement

A path must be visible that starts from an accepted premise

$\nexists$ a path for α, 5 from $V_{s+2} = 10\,(V_{s+1} - V_s)$

Source of ~~Fundamental Constants~~

Great Pyramid examples — path Ancient Astronaut

Particular Pyramids

Measured

ϕ

π

$(\alpha\mu)^2$

$\cos^{-1}[(\alpha\mu)^4 - 1]$

etc.

$\tan^{-1}[10(\alpha\mu - 1)]$

etc

u ...

related to Abstraction - Generalization

Is the Big Bang, one bridge link too far

or is the pattern incomplete

Quote on → precision

Introduction
Metatoms 1968

COINCIDENCES
CURIOSITIES
AND
CONSPIRACY
THEORIES

INTRO

THEORIES
Borstein Einstein

Feyerabend

Alternatives
when 3 missing pieces

~ MUSIC
NUMBERS PLAY GAME
AS ARTISTS

DEFN of Above

YANGHUIS
CALENDARS WEEK KALPAS CHON
PYRAMIDS
PRESIDENTS
SAND RECKONER - EDDINGTON
VULCAN et all

Introduction
Theories
Coincidences
Conspiracy Theories

Coints

Dedication

To all who have escaped the a party-line ~~Party Line~~ dogma

THE CONSTITUTION
OF THE UNITED STATES
OF AMERICA

SEPTEMBER 17, 1787

WE THE PEOPLE OF THE UNITED STATES,
IN ORDER TO FORM A MORE PERFECT UNION,
ESTABLISH JUSTICE,
INSURE DOMESTIC TRANQUILITY,
PROVIDE FOR THE COMMON DEFENSE,
PROMOTE THE GENERAL WELFARE,
AND SECURE THE BLESSINGS OF LIBERTY TO OURSELVES AND OUR POSTERITY,
DO ORDAIN AND ESTABLISH THIS CONSTITUTION FOR
THE UNITED STATES OF AMERICA.

1] UNION
2] JUSTICE
3] TRANQUILITY
4] DEFENSE
5] WELFARE
6] LIBERTY

INTERPRETATIONS AND UPDATES
PRIORITY REVISION

1] –1] Unity supportive of diversity, not of uniformity

3] –2] Tranquility, non-violence, societal safety

2] –3] Justice, equal access for general upward movement

5] –4] Welfare, the infrastructure, transportation and distribution, health, education

4] –5] Defense by example, respect, compassion, Force in reserve only,

6] –6] Liberty to the point where it does not create any jeopardy to the above five

COSMIC CURIOSITIES

- The Great Pyramid at 30° North Latitud
  position error, not due to builders
  but to continental drift

Stonehen
Lat = 51° N

- Dates in the Analemma Samhain 4th Nov Christmas Mardi Gras
  its form change

- The Week exactly 120 to 7
  or change in mass, + rotation period

- 1.127074 ~~to~~ 1.127017
  shift in ?

- Shift from a template time or to a template time
  random or oscillatory ?

In a scatter diagram — our errors?
point scattering? from curve
point converging? to curve
no template ? no curve justified

- The Presidents
  The curse of Tengslaus

ALL

How many of our theories are "conspiracy theories"

adding more data ~~[illegible]~~ falsifies them

But they are candidate theories
when data are missing

i.e. ∃ {candidate theories} with
insufficient data

call them | accepted
not conspiracy } more true

falsification of conspiracy theories

COGITANS

In our thinking we separate what is inseparable:

- Creator and Creation
- Designer and Design
- Selector and Selection

We fail to relate what is related

- Process and Product
- Option and Action[1]
- Form and Force

And we homogenize what is distinct.

IDENTITY

The technological changes of the past two centuries have rendered obsolete our way of looking at the world. Not only are our ways of thinking [illegible] but our [illegible] them in our children has created an impending cultural crisis: A culture becoming incompatible with its environment and oblivious of its trend to self destruction. Our [illegible] become local and synchronic. We connect with what is immediately contiguous, and with what is current and continuous. We either ignore or are unaware of the broader contexts essential to our actions and our survival. In remedy, there has been a call for "reentification", which means the depackaging of our traditional and current associations between the elements of our experience and coming up with alternate connections and patterns more isomorphic to the real nature of the world we inhabit. This requires a revolution in our way of thinking, in our way of organizing, in our way of evaluating. Such a revolution would not only revise our educational system, but many of our other basic institutions: legal, political, commercial, and even religious.

In the present world order we find that the major decisions are being made by people totally unqualified to make them. The important decisions in today's world involve complex technical, economic, and ethical issues. And those making the critical decisions lack the technical, historical, and philosophical backgrounds needed for meaningful resolution of the issues. At an earlier period legal training was held to be sufficient for doing legislation. This is no longer the case. In fact legal training, how to think like a lawyer, is deleterious to useful decision making in today's world. But worse, the psychological types of people attracted to political power are exactly those who should never hold political power. (Even those of this species see the truth of this in an extreme case such as that of Bolton). Noteworthy, over 2500 years ago, Confucius came to the conclusion that "those who desired political power should automatically be disqualified.

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[1] This trade-off may also be stated as: Insight vs Movement, Awareness vs Focus. In general, Action takes two forms: movement or selection.

COSMIC CURIOSITIES

05-01-02

FOUR JUXTAPOSINGS

I $A_{n+2} = 10A_{n+1} - 10A_n \rightarrow$ root $u = 5-\sqrt{15} = 1.1270166$, $u^2 = 1.270166$

The recursive formula of the Fibonacci Family

$v = 5+\sqrt{15} = 8.8729833$, $v^2 = 78.729833$

$\frac{v^2}{2} = 39.364917$

ORIGIN OF 10 = element of Yanghui Fractal

10 from the sacred tetraktys not from 10 fingers

holy four-foldedness

τετρακτύς

$\log_{S_{10}} S = 39.355882$, $\log(\ldots) = 1.127074$

Pythagoras' Cosmos

II MUSIC

tones, semi-tones, parts of semi-tones related to $2^x, 3^y$

Pythagoras Diatonic Scale

III ~~Inverse~~ Alternating Yanghui modules

fractals $\sim 2^x, 3^y$

Wolframs Fractals

$N = $ # of zero's, $r =$ row $\ni$ $r = 2^n$

$N = 2^r(2^{r+1}+1) - 3^{r+1}$

Number of 1's $= 3^r$ if r is of species 2^n

Total $= \frac{r(r+1)}{2}$

0, 1's

+ → PASCAL'S TRIANGLE

− → FRACTALS

× → UNIFORMITY all 1's

÷ → RANDOM "0/0"

Zero and One are two species of nothingness that interact to make somethingness

∧ → ?

Γ → ?

Zero ~ Vairacona

One ~ Aksobya

IV FORCES

Asymptotic Freedom

Gravitation

Strong

Ƥ

Weak

Electric

New Fulcrums and means

e.g. Ƥ

THE FIRST ONE HUNDRED NUMBERS LISTED IN ALPHABETICAL ORDER FOR QUICK AND EASY REFERENCE

EIGHT	08	ONE HUNDRED	100
EIGHTEEN	18	SEVEN	07
EIGHTY	80	SEVENTEEN	17
EIGHTY EIGHT	88	SEVENTY	70
EIGHTY FIVE	85	SEVENTY EIGHT	78
EIGHTY FOUR	84	SEVENTY FIVE	75
EIGHTY NINE	89	SEVENTY FOUR	74
EIGHTY ONE	81	SEVENTY NINE	79
EIGHTY SEVEN	87	SEVENTY ONE	71
EIGHTY SIX	86	SEVENTY SEVEN	77
EIGHTY THREE	83	SEVENTY SIX	76
EIGHTY TWO	82	SEVENTY THREE	73
ELEVEN	11	SEVENTY TWO	72
FIFTEEN	15	SIX	06
FIFTY	50	SIXTEEN	16
FIFTY EIGHT	58	SIXTY	60
FIFTY FIVE	55	SIXTY EIGHT	68
FIFTY FOUR	54	SIXTY FIVE	65
FIFTY NINE	59	SIXTY FOUR	64
FIFTY ONE	51	SIXTY NINE	69
FIFTY SEVEN	57	SIXTY ONE	61
FIFTY SIX	56	SIXTY SEVEN	67
FIFTY THREE	53	SIXTY SIX	66
FIFTY TWO	52	SIXTY THREE	63
FIVE	05	SIXTY TWO	62
FORTY	40	TEN	10
FORTY EIGHT	48	THIRTEEN	13
FORTY FIVE	45	THIRTY	30
FORTY FOUR	44	THIRTY EIGHT	38
FORTY NINE	49	THIRTY FIVE	35
FORTY ONE	41	THIRTY FOUR	34
FORTY SEVEN	47	THIRTY NINE	39
FORTY SIX	46	THIRTY ONE	31
FORTY THREE	43	THIRTY SEVEN	37
FORTY TWO	42	THIRTY SIX	36
FOUR	04	THIRTY THREE	33
FOURTEEN	14	THIRTY TWO	32
NINE	09	THREE	03
NINETEEN	19	TWELVE	12
NINETY	90	TWENTY	20
NINETY EIGHT	98	TWENTY EIGHT	28
NINETY FIVE	95	TWENTY FIVE	25
NINETY FOUR	94	TWENTY FOUR	24
NINETY NINE	99	TWENTY NINE	29
NINETY ONE	91	TWENTY ONE	21
NINETY SEVEN	97	TWENTY SEVEN	27
NINETY SIX	96	TWENTY SIX	26
NINETY THREE	93	TWENTY THREE	23
NINETY TWO	92	TWENTY TWO	22
ONE	01	TWO	02

Do Primes

THE TITIUS-BODE LAW

This relationship approximating the distances of the planets from the sun was first noticed by Titius of Wittenberg, then independently by Bode in 1772. It may be developed as follows:

1) Form the sequence: 0 3 6 12 24 48 96 192 384 768
each number ~~after is~~ being doubled
2) Add 4 to each number: 4 7 10 16 28 52 100 196 388 772
3) Divide by 10 0 .4 0.7 1.0 1.6 2.8 5.2 10 19.6 38.8 77.2

The sequence in 3) closely approximates the distances of the successive planets from the sun as measured in astronomical units (earth = 1)

PLANET	DISTANCE IN A.U.	BODE VALUE
MERCURY	0.3871	0.4
VENUS	0.7233	0.7
EARTH	1.0000	1,0
MARS	1.5237	1.6
CERES (ASTEROID)	2.767	2.8
JUPITER	5.2028	5.2
SATURN	9.540	10
URANUS	19.18	19.6
NEPTUNE	30.07	38.8

This relation made important contributions to astronomical history, leading to the search for Uranus and the discovery of the asteroids. Uranus was discovered in 1781 having a distance in good agreement with the Bode sequence. But there still was a gap. No planet in the 2.8 position. This lead to a search that discovered the first asteroid, Ceres, on Jan 1 1801, followed by hundreds of others filling in the blank. A planet that fragmented? Or never coalesced?

Since Neptune and Pluto and all beyond disregard the sequence, and having no physical basis, Bode's Law lost its status of being a law and became just a curiosity. None the less, its numerical regularity with approximate fits to each of the eight existing planetary objects nearest the sun should require its being kept on the table. When data from other planetary systems is available, there might turn out to be a "Bode Zone" in which planetary distances from their principal star, follow a similar sequence.

But according to our way of describing the world, to be a "law" requires that a relationship be universally valid for all time. The idea that there might be different laws for different zones and times is repugnant to our monolatry tradition.

How long does it take for the Sun's light to reach the Earth?

Because the Sun is an average of 93,000,000 miles (149,598,770 kilometers) from the Earth, and the speed of light is approximately 186,000 miles per second, it is easy to determine the approximate time (t) it takes for the Sun's light to reach the Earth using mathematics:

$$\begin{aligned} t &= 93{,}000{,}000 \text{ miles} / 186{,}000 \text{ miles per second} \\ &= 500 \text{ seconds (miles cancel each other out)} \\ &= 8.3 \text{ minutes} \end{aligned}$$

What is the **Titius-Bode Law**?

The Titius-Bode Law was developed by German astronomer Johann Daniel Titius (1729–1796); Titius's idea was brought to the forefront by German astronomer Johann Elert Bode (1747–1826). The law actually represents a simple mathematical rule that allows one to determine the distances (also called the semi-major axis) of the planets in astronomical units. It is determined using the equation $a = 0.4 + (0.3)2^n$, in which n is an integer and a is the astronomical unit. Interestingly enough, most of the planets—and even the asteroids in the Asteroid Belt—adhere to the law. The only exception is Neptune, the second-to-last planet in our solar system.

Distances of the Planets from the Sun in Astronomical Units

Planet	n	Titius-Bode Law*	Actual Semi-Major Axis**
Mercury	$-\infty$	0.4	0.39
Venus	0	0.7	0.72
Earth	1	1	1
Mars	2	1.6	1.52
asteroid belt	3	2.8	2.8
Jupiter	4	5.2	5.2
Saturn	5	10	9.54
Uranus	6	19.6	19.2
Neptune	—	—	30.1
Pluto***	7	38.8	39.4 — 39.481 Cox p.294

* The original formula was $a = (n + 4)/10$, in which $n = 0, 3, 6, 12, 24, 48 \ldots$; a is the mean distance of the planet to the sun.

** This is based on the formula $a = 0.4 + (0.3)2^n$, in which $n = -\infty, 0, 1, 2, 3, 4, 5, 6, 7$. The results can also be found using $a = 0.4 + 3 \times n$, in which $n = 0, 1, 2, 4, 8, 16, 32, 64, 128$. Both formulas are "modern versions" of the Titius-Bode Law.

*** Pluto is a modern addition; the planet was unknown during Bode and Titius's time.

UPDATE = PROTOPS.WPD PROTO PLANETS The Search For Symmetries

INERPLNTS.WPD April 12, 2007 Participation

SOME NUMERICAL CONSPIRACIES BY THE INNER PLANETS

The Fibonacci sequence, $F_{n+2} = F_{n+1} + F_n$; 1,1,2,3,5,8,13,21........diverges, but the ratios of successive terms, 1, 2, 3/2, 5/3, 8/5, 13/8,.... converge to $\Phi = (1+\sqrt{5})/2$ and their reciprocals, 1/2, 2/3, 3/5, 5/8, 8/13,.... converge to $\phi = (1-\sqrt{5})/2$.

The earth's sidereal period $E^* = 365.2564$ days

$E^* \times 8/13 = 224.7732$, while the sidereal period of Venus = 224.7007 days

$E^* \times 8/5 = 584.4102$, while the synodic period of Venus = 583.9214 days

The sidereal period of Venus x 5/8 = 140.4379 days,

and 140.4379 x 5/8 = 87.7737, while the sidereal period of Mercury = 87.9686 days

These relations, though not accurate to the full precision of the observations, suggest that Fibonacci ratios, and ϕ or Φ, play a role in the relationships between the periods of the inner planets. This is especially evident when a quasi-planet, Proteus[1], is placed between Venus and Mercury, as shown in the following table:

TABLE I

SIDEREAL PERIODS (In earth days)

EARTH	VENUS	PROTEUS	MERCURY	VULCAN
$365.2564 \times \phi^0$	$365.2564 \times \phi^1$	$365.2564 \times \phi^2$	$365.2564 \times \phi^3$	$365.2564 \times \phi^4$
365.2564	225.7409	139.5155	86.2253	53.2902
365.2564	224.7007	139.5155	87.9686	53.2902

The shaded row in Table I gives the observed sidereal periods of Mercury, Venus, and Earth, and the Fibonacci values for Proteus and Vulcan. The third row of Table I gives the numerical values of the products of the second row.

The notion of a quasi-planet is not new. In the middle of the 19th century, the French astronomer Le Verrier, who had successfully predicted the existence and position of Neptune from perturbations in the orbit of Uranus, found some irregularities in the orbit of Mercury and predicted the existence of a planet "Vulcan" whose orbit lay between that of Mercury and the sun. Using several reported sightings of small black bodies passing across the disk of the sun, Le Verrier calculated that there existed a planet of small mass with an orbital period of 33 days. It was predicted that this planet would transit the sun on the 22 March 1877. The transit did not occur or was not observed, so Vulcan went into limbo. While, Le Verrier predicted Vulcan from perturbations, here we need Proteus and Vulcan to fill out the Fibonacci sequence in Table I.

---

[1] Proteus, named for the god who was adept at shape changing and predicting the future, seems an appropriate label for a quasi planet that plays a predictive role but has somehow hidden itself from observation.

SYNODIC PERIODS

The synodic period of a planet may be defined as the period of time between alignments of the sun, earth, and planet. If all were in the same plane, an alignment would be when a straight line could be passed through all three. If E* and G* are the sidereal periods of the earth and a planet G, then the synodic period of G = G^ is given by the equation,

$$\frac{\mathbf{E}*\mathbf{G}*}{\mathbf{E}*-\mathbf{G}*}=\mathbf{G}\wedge$$

Generalize to eclipses

TABLE II
SYNODIC PERIODS (in Earth days)

ϕ =0.618033989	VENUS	PROTEUS	MERCURY	VULCAN
x ϕ^{-1}		365.2564		
SYNODIC	583.9214	225.7409	115.8775	62.39325
x ϕ	360.8833	139.5155	71.6162	38.5611
x ϕ^2	223.0381	86.2253	44.2613	23.8321
x ϕ^3	137.8452	53.2902	27.3550	
x ϕ^4	85.1930	33.9351 →	vulcan?	
x ϕ^5	52.6522			

In Table II the shaded row gives the synodic period for each planet in Earth days.
The columns are synodic Fibonacci sequences based on each planet's synodic period.

Let us next imagine we can travel to the other planets, both real and quasi, and determine what the synodic periods of other planets would be when observed from Venus, Proteus, Mercury, and Vulcan as we have already have done from Earth.. In Table III are listed the synodic periods as would be observed from the planet in the left column.

TABLE III (In Earth days)

	EARTH	VENUS	PROTEUS	MERCURY	VULCAN
EARTH	-	583.9206	225.7408	115.8763	62.3942
VENUS	583.9206	-	368.0126	144.5645	69.8589
PROTEUS	225.7408	368.0126	-	238.0935	86.2272
MERCURY	115.8763	144.5645	238.0935	-	135.1856
VULCAN	62.3942	69.8589	86.2272	135.1856	-

There are several symmetries in the sidereal and synodic periods of these five proto-planets:

Sidereal Periods (*)

EARTH	VENUS	PROTEUS	MERCURY	VULCAN
$E^* \phi^0$	$E^* \phi^1$	$E^* \phi^2$	$E^* \phi^3$	$E^* \phi^4$
365.2564	225.7409	139.5155	86.2253	53.2902
E	A [2]	P	M	V
	$E - P$	$A - M$	$P - V$	
	$\sqrt{(E \cdot P)}$	$\sqrt{(A \cdot M)}$	$\sqrt{(P \cdot V)}$	
	♀* + 1	$\sqrt{(E \cdot V)}$	☿* − 1	
		$E - A$		
		$M + V$		
		$(E + V)/3$		
$E/V = \Phi^4$	$A/M = \Phi^2$		$M/A = \phi^2$	$V/E = \phi^4$

Synodic Periods (^)

$$E^* \cdot P^* = (E^* - P^*)^2, \quad P^\wedge = E^* \cdot P^*/(E^* - P^*) = (E^* - P^*) = A^*, \quad \therefore\ P^\wedge = A^*$$

$$P^* \cdot V^* = (P^* - V^*)^2, \quad V^\wedge = P^* \cdot V^*/(P^* - V^*) = (P^* - V^*) = M^*, \quad \therefore\ V^\wedge = M^*$$

where V^ is the synodic period of Vulcan as observed from Proteus.

Since the synodic period of Proteus = the sidereal period of Venus , the Fibonacci sequence based on the Synodic period of Proteus is the same as the Fibonacci sequence of the sidereal periods of the five planets.

Approximately: ♀^ = $E^* \cdot \Phi$ ♀* = $(E^* \cdot \phi)$

---

[2] To avoid V–confusion we restored Venus her proto–name, Aphrodite.

Better Vulcan → Hephaestus

leave Venus V

Vulcan H

SOME APPROXIMATIONS

values:

$\sqrt{2} = 1.4142135623730950488016887242097$

$\pi = 3.1415926535897932384626433832795$

$e = 2.7182818284590452353602874713526\,6$

$\Phi = 1.6180339887498948482045868343656\,4$ = the golden section

$\gamma = 0.5772156649$ = Euler's constant

$\delta = 4.6692016091029$ = Feigenbaum's constant

$\log \delta = 0.66924262651820317917383358337518\,8$

$\delta - \log \delta = 3.99995898258469682082616641662481 \doteq 4.0000$

$e\Phi/\pi = 1.40001358369048485629861350299979 \doteq 7/5$

$5e/7\pi = 0.61803998530876077658412484974720\,7 \doteq \phi = \Phi - 1 = 1/\Phi$

$199^{1/11} = 1.61803027449371786505215835713453 \doteq \Phi$

$\pi/4 = 0.78539816339744830961566084581987\,6 \doteq 1/\sqrt{\Phi}$
$1/\sqrt{\Phi} = 0.78615137775742328606955858584295\,9 \doteq \pi/4$

$5\pi = 15.7079632679489661923132169163975 \doteq 6\Phi^2$
$6\Phi^2 = 15.7082039324993690892275210061938 \doteq 5\pi$

[also used by Bob Williams]

$\sqrt[3]{31} = 3.14138065239139300449307589646275 \doteq \pi$

$e\Phi^{3/2} = 5.594688903 \doteq \frac{28}{5} = 5.6$

also See Hindu Mythology Book

LARGNUMB.WPD JUNE 11, 2000

KALPAS AS UNITS OF TIME

While we know that the ancients developed systems for expressing large numbers, we are ignorant of any practical applications for which they needed large numbers. Particularly, we recognize the creativity of Archimedes in his "Sand Reckoner" and of unknown Hindu mathematicians in their development of the system of yugas and kalpas. Today we have many uses for large numbers to express social, economic, and scientific quantities and have developed a convenient representation by expressing them as powers of ten. For example, one billion = 1,000,000,000 = 10^9. In our culture, astronomy has long been the cradle of large numbers, for distances, numbers of stars and other objects, and for their ages. With recent focus on the cosmological importance of the age of the universe, (derived from its rate of expansion), it is of interest to see what modern age numbers might look like when expressed in terms of ancient units like yugas and kalpas, which were used to represent great lengths of time.

THE HINDU TIME SYSTEM

See also Book on Hindu Mythology

Brahma, the creator of the universe, is supposed to have a lifetime of 100 Brahma Years, each of 360 Brahma Days. The length of one Brahma Day is called a kalpa and is 4.32×10^9 earth years. This would make Brahma's lifetime equal to about 156×10^{12} earth years. It is held that at the end of such a period the world disappears to be replaced by a new world with a new Brahma. But there are subdivisions to the kalpa or Day of Brahma. One kalpa is equal to 1000 mahayugas, each of which would be of length 4.32×10^6 earth years or of 12,000 so-called Divine Years. This works out to one Divine Year = 360 earth years, [$360 \times 12{,}000 = 4.32 \times 10^6$] Each mahayuga consists of four yugas, each successive yuga is of decreasing length, containing increasing strife and conflict. The first yuga is the Krta Yuga whose length is 4000 Divine Years, [1,440,000 earth years]; the second is the Treta Yuga of 3000 Divine Years, [1,080,000 years]; the third is the Dvapara Yuga of 2000 Divine Years, [720,000 years]; and the last is the Kali Yuga of 1000 Divine Years, [360,000 years]. These add up not to 12,000 Divine Years, but to only 10,000 Divine years. The discrepancy is explained in terms of "yuga dawns and twilights".

THE 20^{TH} CENTURY COSMOLOGICAL SYSTEM

For most of the 20^{th} century, cosmologists have been using a model based on a "critical density"; critical in the sense that if exceeded, the universe will oscillate between a series of big bangs and big crunches, and if deficient, will expand forever. The jury is still out, but at the beginning of the 21^{st} century, the smart money is on insufficient matter and eternal expansion. In this model we are concerned with three quantities:

1) An observable: the Hubble parameter, H_o measured in kilometers/second/megaparsec.
2) An interval of time called the Hubble Age, A, the time from the present back to an origin assuming constant rate of expansion at the present rate, measured in billions of years.
3) The so-called age of the universe, T, the time from the present back to the big bang, measured in billions of years.

These quantities are related as follows:

(H_o in km/sec/mpc) x (A in billions of years) = 978; and T = 2/3 A

KALPAS AS UNITS OF TIME

The table shows the relations between the Hubble parameter, H_o; the Hubble time or age, A; the time since the big bang, the so-called age of the universe, T; with $\log_{10}$ values.

H_o km/sec/mpc	A Gyr	T Gyr	log T years	log T seconds
1) 550	1.8	1.2	9.079	16.578
2) 71.99	13.58	9.056	9.956955	17.456067
3) 75.46	12.96	8.64	9.936514	17.435626
4) 150.93	6.48	4.32	9.635484	17.134596
5) 4.1924×10^{-3}	233,280	155,520	14.191786	21.690898

1) Hubble's first value [Realm of the Nebulae p168, 1936]
2) Current value based on Cepheids [Friedman et al, 1999] This value = $(\alpha\mu S)^{3/2}\, t_o$
3) Value corresponding to 2 kalpas
4) Value corresponding to 1 kalpa
5) Value corresponding to "Lifetime of Brahma"
[log number of seconds in year = 7.499112]

$$\begin{array}{r} 21,690898 \\ 2 \\ \hline 43,381796 \\ \approx \\ P\ \ 43,268366 \end{array}$$

$(\text{Lifetime})^2 = P$ or $\sqrt{P}$ = lifetime of Brahma 21,634183

Notes: The age of the earth is estimated to be about 4.5 Gyr which is close to one kalpa, which means the earth was born toward the end of the first Day. The sun is estimated to be about 4.7 Gyr, though a second generation star, it was still born in the first Day. The age of the universe 2) is "slightly" over two kalpas. Meaning we have been in the third Day of Brahma for 0.42/4.32 = 0.097 Day, that is for about 420 million years. This means the third Day of Brahma began 420 million years ago in the Silurian period, the age of first appearance of vertebrates, the fishes, and the first seedless land plants and ferns. Since the beginning of the third Day, there have been 97 mahayugas (out of 1000 per Day). The 98th mahayuga of the third day began 960,000 years ago in the Pleistocene epoch. This was the time of homo erectus well before homo neanderthalensis and homo sapiens. But since 960,000 years is less than 1,440,000 years of a Krta Yuga, we are still in a Krta Yuga, with 680,000 years to go. That should be good news for all of us.

If we define the Planck Age, P_A, as +43.268366 seconds, and take the total number of Brahmas, past, present, and future, B_N, as having the same numerical value as the lifetime of Brahma, B_L, in seconds = 21.690898, then $B_N \times B_L$ = +43.381796, ~ P_A. [$\log_{10}$ values]

OR $\sqrt{P} \approx 21,634183$ ≈ Life time of Brahma

While the use of kalpas has no advantage over our powers of ten notation, it does help to put relative lengths of time into perspective by reducing billions and millions of years to days and hours. Since the big bang we are now only two hours and 20 minutes into the third Day of Brahma.

KALPASUP.WPD July 8, 2005

HUBBLE AND THE KALPAS

The units of the Hubble parameter, H_o, are in kilometers/second/megaparsec.
One megaparsec is equivalent to 19.489352 kilometers [$\log_{10}$ value]
Hence an $H_o = 1$ is equal to -19.489352 sec^{-1}
Or an $H_o = V$ gives a frequency of $\log V - 19.489352$ sec^{-1}, or a time of $19.489352 - \log V$ sec

The best current value for the Hubble constant, H_o, is about 72 km/sec/mpc.
If we use the value $H_o = 71.977$; with $\log(71.977)$[1] = 1.857194;
we get a log Hubble Time of 17.632158 sec, or log time of 10.133046 years
The anti log value becomes 13.584573×10^9 years

Some call Day of Brahma Day+Night, i.e. 8.640×10^9 years

A Kalpa or day in the life of Brahma is defined as 4.320×10^9 years
[with a $\log_{10}$ value of 9.635484 years = 17.134596 seconds]
If the age of the present Brahma began with the Big Bang, then

the first Kalpa began	13.584×10^9 years ago	Big Bang
the second Kalpa began	9.264×10^9 years ago	First generation stars
the third Kalpa began	4.944×10^9 years ago	Second generation stars, sun 2° Kalpa
the fourth Kalpa began	624×10^6 years ago	In the Sinian Era[2]

The present Brahma is now in his fourth day.

An alternate theory places the age of the universe at 2/3 the Hubble Time.
Again using the same value of H_o as above, the log age then becomes 17.456065 sec
[$= (\alpha\mu\, m_o/m_p)^3 \times t_o$]; with a corresponding log value = 9.956953 years
whose anti log value is 9.056×10^9 years
If the age of the present Brahma began with the Big Bang, then

the first Kalpa began	9.056×10^9 years ago	Big Bang
the second Kalpa began	4.736×10^9 years ago	Age of sun
the third Kalpa began	416×10^6 years ago	in the Silurian period[3] 2° Kalpa

The present Brahma is now in his third day.

---

[1]This value of the Hubble Parameter derives from $(\alpha\mu\, m_o/m_p)^3 \times t_o$, where α is the fine structure constant, μ is the proton/electron mass ratio, m_o is the Planck mass, m_p is the proton mass, and t_o is the Planck time..

[2]The Sinian era was from about 800 to 570 million years ago, time of the oldest animal fossils. The Cambrian Period began 570 million years ago, with the great Cambrian radiant at about 530 million years ago.

[3]The Silurian period , 439-409 million years ago, time of the first land plants. [The first recorded extinction was about 440 million years ago.]

A Variation of Special Relativity

05-05-18

COSMIC CURIOSITY

$$l = L\sqrt{1-\frac{v^2}{c^2}}$$ $l \to 0$

$$t = \frac{T}{\sqrt{1-\frac{v^2}{c^2}}}$$ $t \to \infty$

Classical Version

$$m = \frac{M}{\sqrt{1-\frac{v^2}{c^2}}}$$ $m \to \infty$

$\lim_{v \to c}$, $\frac{l}{t} = 0$ i.e. $v \to 0$

Paradox

Variation

Assume as $v \to c$ $l \to l_0$, $t \to t_0$, $m \to m_0$ } the Planck values

-32.791
-43.268
-4.662

write β for $\sqrt{1-\left(\frac{v}{c}\right)^2}$

as $v \to c$, $\beta \to 0$

AVOID SINGULARITIES

$$l = \beta L + l_0$$

$$t = \frac{t_0}{1+\frac{\beta t_0}{T}}$$ or for frequencies $f = \beta F + f_0$

$$m = \frac{m_0}{1+\frac{\beta m_0}{M}}$$ $\boxed{\text{but observed that } m \to \infty}$?

masses of -23 going toward -4 appear to be $\to \infty$

as $\beta \to 0$ $\frac{l}{t} \to \frac{l_0}{t_0} = c$, and

Force

$$\frac{ML}{T^2} \to \frac{m_0 l_0}{t_0^2} = \frac{c^4}{G}$$

Action

$$\frac{ML^2}{T} \to \frac{m_0 l_0^2}{t_0} = \hbar$$

EPISBALT.WPD May 14, 2005

AN EPISTEMOLOGICAL BALLOT

In designing (or selecting) an epistemology check which of the following you wish to include:

First, select allowed input channels.
- ❑ Sensory data (Positivism)
- ❑ Mathematical concepts and constructs
- ❑ Intuitive perceptions (Recognition)
- ❑ Revelation (Vision)

Second, select a probability distribution
- ❑ Gaussian (Science)
- ❑ Minimum sigma
- ❑ Bi-modal
- ❑ Disregard probability

Third, select a probability range
- ❑ The total distribution
- ❑ The most probable sub-portion (the most repetitive)
- ❑ A least probable section
- ❑ A Dirac function (probability either 1 or 0)

Fourth, select methods for validating
- ❑ Reproducibility
- ❑ Logical analysis (consistency)
- ❑ Consensus (or majority)
- ❑ Authority

Fifth, select dialectical processes
- ❑ Question/answer
- ❑ Hypothesis formulation/testing
- ❑ Thesis/antithesis –> synthesis (Hegel)
- ❑ Suppression of alternatives

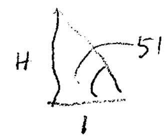
Sixth, select desired product
- ❑ Knowledge
- ❑ An ontology (reality)
- ❑ A belief system ("truth")
- ❑ Dogma (Power)

It must be noted that whatever the selection, it will perpetuate itself. The selection becomes the selector, and will seek to reaffirm itself by focusing on what it has rendered ordinary and familiar,

GREAT PYRAMID

Take side of base as 2, Area = 4, vol = $\frac{4H}{3}$

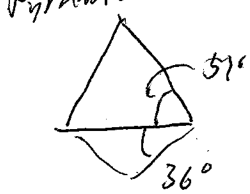
If $\gamma = 51^\circ 50' 40''$ $\quad H = \arctan 51$



$51^\circ.8445$

$\tan\gamma = 1.272806$ = Height ✓

Inverse Pyramid



Vol = $\frac{4H}{3}$ = 1.697074 ✓

What is an inverse pyramid

$\bar{H}$ = Neg Height = $2 - H = 0.727194$

$\beta = \tan^{-1}(2-H) = 36^\circ.024923$

51
36
87

Note $\tan\gamma = 1.272806$
$\sqrt{\ } = 1.128187$
cf. $\alpha = 1.127074$

Vol $\frac{4\bar{H}}{3} = 0.969592$

$\frac{4H}{3} = 1.697075$

Total V = 2.666667 $\qquad 2^2/_3 = \frac{8}{3}$ ✓

ratio $\frac{V_H}{V_{\bar{H}}} = 1.750298 \doteq \frac{7}{4}$

Case for α^μ

If $\tan\gamma = 1.127074 = \alpha$, $\gamma = 48^\circ.418856$ $\quad \tan\gamma = \alpha^2 = 1.2702958$

If Case for G.P. based on α the fine structure constant

$\gamma = 51^\circ.7895$ ✓
H $51^\circ.8445$
0.0550 off by 3'.3 arc

Case for Φ $\quad \sqrt{\Phi} = 1.2720197 \rightarrow \gamma = 51^\circ.8273$

$\sqrt[4]{\Phi} = 1.1278385$

α^μ CASE $\quad H = 1.270296 \quad V = \frac{4H}{3} = 1.693728$

$\bar{H} = 2 - H = 0.729704 \quad \gamma = 36^\circ.1184$

$V = \frac{4\bar{H}}{3}$ 0.972939 $\qquad$ Total Vol = $\frac{8}{3}$ ✓

07-05-09

$\frac{V_H}{V_{\bar{H}}} = 1.740837$

Φ case $\quad H = 1.2720197 \quad V_H = \frac{4H}{3} = 1.6960262$

$\bar{H} = 0.727980 \quad V_{\bar{H}} = \frac{4\bar{H}}{3}$ 0.970641

2.666667 ✓ $\qquad$ TOTAL $\frac{8}{3}$

Also ∃ the π pyramid

$\gamma = 36^\circ.0539$

$\frac{V_H}{V_{\bar{H}}} = 1.7473259 \sim \frac{7}{4}$

Max V/A case

Pyramids

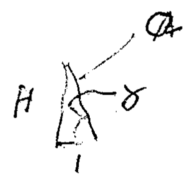
I π

II Φ

III max V/A

IV αH

V $51 + \theta = 90$ inverse pyramid



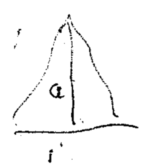
$H = \tan\gamma$

$a = \frac{1}{\cos\gamma}$

V	A
$\frac{S^2 H}{3}$	$4SA$

$b = 2$ $\quad V = \frac{4\tan\gamma}{3}$

$V = \frac{b^2 H}{3}$



$A = 4a = \frac{4}{\cos\gamma}$

$\frac{V}{A} = \frac{4\tan\gamma}{3\ 4}\cos\gamma = \frac{\sin\gamma}{3}$

$\frac{d}{d\gamma}\left(\frac{V}{A}\right) = \frac{1}{3}\cos\gamma = 0$ $\quad 30^\circ$

$\gamma = 90$

αμ and The Great Pyramid

$y = 1.127017$
$48.^{\circ}417418$
$y^2 = 1.270167$
$51.^{\circ}786717 = 51^{\circ}\,47'\,12''$
tan = 1.2701673

$y = 1.127074 = \log_{10}$ (αM)
$48^{\circ}418856$
$y^2 = 1.2702958 \sim (\alpha M)^{\alpha M}$
$51.^{\circ}789534 = 51^{\circ}\,47'\,22''$
tan = 1.2702958

Great Pyramid Giza $51^{\circ}\,50'\,40'' = 51.^{\circ}84$ Measured = 51.8445 tan = 1.2728

π Pyramid 51.8540
Φ Pyramid 51.8273
$W = \frac{\pi}{2}$ 51.7850 Internal Spherical angle tan = 1.270089
$W = ?$
$\sqrt{\ } = 1.1269823$
$\ast$ 1.127074
δ 0.000092

Sphere 4π
$\frac{1}{8}$, Sphere $= \frac{\pi}{2}$
an octant

$\frac{y = 1.127017}{x = 8.872983} = 0.1270167 = y-1$ $\frac{y}{x} = y-1$

Work backward from measure

$\frac{x}{y} = 7.872981 = \frac{x}{y} = x-1$

$y^2 = 1.270167 = \frac{y-1}{10} \sim 51.^{\circ}7867 = 51^{\circ}\,47'\,12''$

arc tan $1.2702958 = 51.^{\circ}789534 =$

$1.127074 = \alpha\mu$ arctan $= 48^{\circ}418856$

$\alpha\mu^2$ 1.2702958 arc tan $= 51.^{\circ}789534 = 51^{\circ}\,47'\,22''$

Measured $51^{\circ}\,50'\,40''$

or

$u = 1.1270167$
$u^2 = 1.2701666 \sim 51.^{\circ}786702 = 51^{\circ}\,47'\,12''$


a
b

tan = 1.1270167 = u
cot = 0.8872983 = $\frac{v}{10} = \frac{1}{u}$
$\frac{1}{\tan} = \cot$

$v = 8.8729833$

05-10-09

¤š□ËDùwà□T□õw□□□7□õwÚ□
+è□T□

Measured 51.853947 − G,11

λ

51.8606

51.7735

→ 51.841287 → 1,2726539 = tm

51,773513

51.82738

$\sqrt{\ }$ = 1.128122

χ^2 = 1.61966

51.8606 — 1.2735427 $\sqrt{\ }$ = 1,128513

51,7735 — 1.2695646 $\sqrt{\ }$ = 1,1267496

So — u^2 is about mean measured!

Numerical Curiosities

3 numbers

TRIPLES

	725	756	650	732	594	200	644
reverse	527	657	056	237	495	002	246
subtract	198	099	594	495	099	198	198
reverse again	891	990	495	594	990	891	891
add	1089	1089	1089 $= 33^2$	1089	1089	1089	1089
−	693	891	94			693	
	77	99	11				

Δ's will be 099, 198, 297, 396, 495 or inv

$\frac{1089}{9} = 121 = 11^2$

$9 \cdot 11^2 = 33^2$

2 numbers

75	34	63	52	22	12
57	43	36	25	22	21
18	09	27	27	00	9
81	90	72	72	00	90
63	81	45	45		99
− 99	99	99	99		
+ 99					

all divisible by 9

exception all digits the same

333
333
000
000
"1089"

$000 \div 9 = 0$

4 numbers

4601	9801	6704
1064	1089	4076
3537	~~8~~712	2628
7353	2178	8262
3816 ÷ by 9	6~~534~~ ÷ by 9 $= 6 \cdot 9 \cdot 11^2$	10890

5634 ÷ 9 626

All digits cannot be the same

÷3 424 108 $10890 = 9 \cdot 8 \cdot 53$

10890 726 ~~30~~ 242 ÷3

242
424
666 74

$3 \cdot 33$	2	99	$9 \cdot 11$	$9 \cdot 11$
$33^2 =$	3	1089	$9 \cdot 11 \cdot 11$	$9 \cdot 121$
	4	10890	$90 \cdot 11 \cdot 11$	$90 \cdot 121$
	5	109890	$90 \cdot 11 \cdot 111$	$90 \cdot$ ~~1210~~ 1221
	6	1098900	$900 \cdot 11 \cdot 111$	$900 \cdot$ ~~1221~~ 1221
	7	10998900	$900 \cdot 11 \cdot 1111$	$900 \cdot 12221$

cf PASCAL

11^0 1 ✓
11^1 11 ✓
11^2 121 ✓
11^3 1331 ✓
11^4 14641 ✓
11^5 161051 X
11^6

$11^n, n=0,1,\ldots$

Any 3 $\rightarrow$ 10 $\rightarrow$ 1 CONVERGENCE

999 number
990
− 9

424
4

Φ and angles

	$\frac{\pi}{10}$ 18°	$\pi/5$ 36°	$6\pi/20 = \frac{3\pi}{10}$ 54°	$\frac{2\pi}{5}$ 72°	$3\pi/5$ 108°
sin	0.309017	0.587785	0.809017	0.951057	0.951057
cos	0.951057	0.809017	0.587785	0.309017	−0.309017
tan	0.324920	0.726543	1.376382	3.077684	−3.077684

$\cos 36 \times \sin 36 = A_{36} = 0.475\,528\,258$

$\cos 72 \times \sin 72 = A_{72} = 0.293\,892\,626$

$\frac{A_{36}}{A_{72}} = \Phi = 1.618\,033\,989$

$\cos 18 \times \sin 18 = A_{18} = 0.293\,892\,626$

$\cos 54 \times \sin 54 = A_{54} = 0.475\,528\,258$

$\frac{A_{54}}{A_{18}} = \Phi$

$\frac{\tan 72°}{\tan 36°} = R = 4.236\,067\,977$

$R - P = 2$

$\tan 72 \times \tan 36 = P = 2.236067978$

$R \times P = 9.472\,135\,955$

$R + P = 6.472\,135\,955$

$(R \times P) - (R + P) = 3$

SQUARE PYRAMID

Max Vol for fixed Surface $\rightarrow$ 51°.827292

$2\cos 36° = \Phi$

$2\sin 54° = \Phi$

$2\cos 72° = \varphi$

$2\sin 18° = \varphi = 0.618\,033\,989$

$\cos^{-1}\varphi = 51°.82729237 = 51°\,49'\,38''.25$

$\sin^{-1}\varphi = 38°.172\,70763$

Khufu at Giza	51° 50' 40"
Khafre	53° 10'
Men Kaure	51° 20' 25"

$\tan^{-1}\pi = 72°.343\,212\,85$

$\tan^{-1}\Phi^2 = 69°.09\,484\,255$

$\tan^{-1}\Phi = 58°.28252558$

$\tan^{-1}\varphi = 31.717\,474\,41$

Φ as area ratio

$\Phi = 1.618034$

$\varphi = 0.618034$

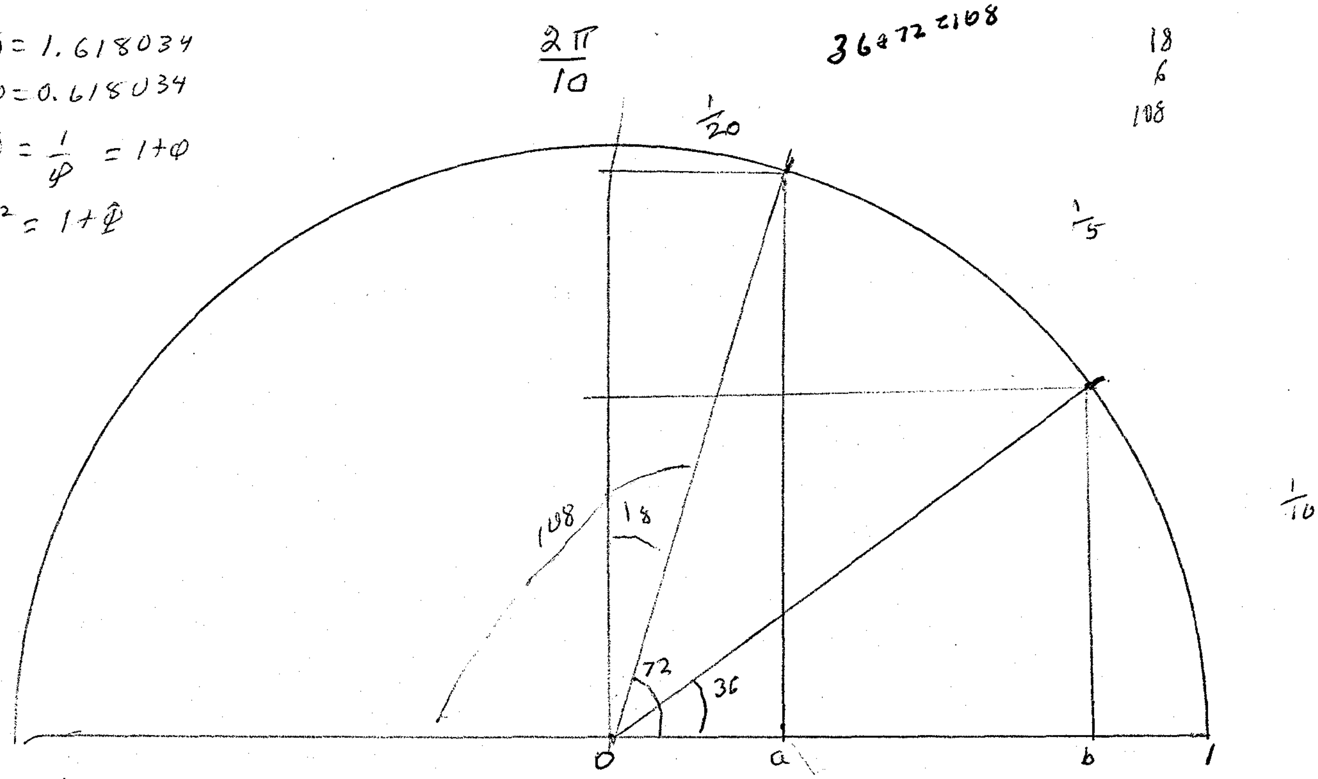
$\Phi = \frac{1}{\varphi} = 1 + \varphi$

$\Phi^2 = 1 + \Phi$

$1^2 \cdot 2^2 \cdot 3^3$

$36 + 72 = 108$

18
6
108



$36° = \frac{2\pi}{10} = \frac{\pi}{5}$, $18° = \frac{\pi}{10}$

$\cos 36 \cdot \,0.5 = \cos 36 - \cos 72$ ~~ab~~

$A_{36} = \cos 36 \times \sin 36 = 0.4755283$

$A_{72} = \cos 72 \times \sin 72 = 0.2938936$

$\frac{A_{36}}{A_{72}} = \Phi = 1.618034$

$\frac{A_{72}}{A_{36}} = \frac{A_{36}}{A_{72} + A_{36}}$

$\sin \frac{\pi}{10} = \frac{\varphi}{2}$, $\cos \frac{4\pi}{10} = \frac{\varphi}{2}$

$\cos \frac{2\pi}{10} = \frac{\Phi}{2}$ $\quad \sin \frac{3\pi}{10} = \frac{\Phi}{2}$

$\sin \frac{\pi}{10} \times \sin \frac{3\pi}{10} = \frac{1}{4}$

$\cos \frac{2\pi}{10} \times \cos \frac{4\pi}{10} = \frac{1}{4}$

$\frac{\tan 72°}{\tan 36°} = 4.236066 = R$

$P + 2 = R$, $R - P = 2$

$\tan 72° \times \tan 36° = 2.236066 = P$

$\sin \frac{5\pi}{10} = 1 \quad \cos \frac{5\pi}{10} = 0$

$A_{18} = A_{72} = 0.2938926$

$A_{36} = A_{54} = 0.4755283$

ratio $= \Phi = \frac{A_{36}}{A_{72}} = \frac{A_{54}}{A_{18}}$

18°		36°	72°	54°
0.309017	Sin	0.587785	0.951057	0.809017
0.951056	Cos	0.809017	0.309017	0.5877853
0.3249197	tan	0.726543	3.077684	1.3763819

Euler: $e^{2\pi i} = 1$

usually Φ as ratio of sides

here Φ as a ratio of areas

$2\cos 36 = 2\sin 54 = \Phi$

$2\cos 72 = 2\sin 18 = \varphi$

$\frac{1}{\tan 54} = \tan 36$

$\frac{1}{\tan 18} = \tan 72$

08-04-23

$\tan G = 1.2720$
$(\alpha\mu)^2 = 1.2702$
$\sqrt{\tan G} = 1.1278$
$\alpha\mu = 1.1270$

$\sqrt{\Phi} = 1.2720197$
$u^2 = 1.2701666$
$(\alpha\mu)^2 = 1.2702958$

G = Great Pyramid angle
$\cos^{-1}\varphi = 51.^\circ 827292 = G$
$\sqrt{\tan G} = 1.1278385$
$\tan G = 1.2720196$
$W = \sqrt{\Phi} = 1.2720197$

$\alpha\mu = 1.127074$
$u = 5 - \sqrt{15} = 1.127017 = \frac{u^2}{10} + 1$
$\frac{W}{10} + 1 = 1.127202 = \frac{\sqrt{\Phi}}{10} + 1$
$\sqrt{\tan G} = 1.1278385$

If $G = 51^\circ 789534$, $\sqrt{\tan G} = \alpha\mu$
Measured G =

sin
Th $18^\circ = \frac{\pi}{10}$ cycle
odd n
cos cycle
even n

$u = \frac{u^2}{10} + 1$

$\frac{\pi}{10} = 18^\circ [0]$

=

odd n

$\sin\frac{\pi}{10} = \frac{\varphi}{2}$
$\sin\frac{3\pi}{10} = \frac{\Phi}{2}$
$\sin\frac{5\pi}{10} = 1$
$\sin\frac{7\pi}{10} = \frac{\Phi}{2}$
$\sin\frac{9\pi}{10} = \frac{\varphi}{2}$
$\sin\frac{10\pi}{10} = 0$
$\sin\frac{11\pi}{10} = -\frac{\varphi}{2}$
$\sin\frac{13\pi}{10} = -\frac{\Phi}{2}$
$\sin\frac{15\pi}{10} = -1$
$\sin\frac{17\pi}{10} = -\frac{\Phi}{2}$
$\sin\frac{19\pi}{10} = -\frac{\varphi}{2}$
360
$\sin\frac{0\pi}{10} = [\sin\frac{20\pi}{10} = 0]$
$\sin\frac{21\pi}{10} = \frac{\varphi}{2}$

even n

$\cos 0 = 1$
$\cos\frac{\pi}{10} =$
$\cos\frac{2\pi}{10} = \frac{\Phi}{2}$
$\cos\frac{4\pi}{10} = \frac{\varphi}{2}$
$\cos\frac{6\pi}{10} = -\frac{\varphi}{2}$
$\cos\frac{8\pi}{10} = -\frac{\Phi}{2}$
$\cos\frac{10\pi}{10} = -1$
$\cos\frac{12\pi}{10} = -\frac{\Phi}{2}$
$\cos\frac{14\pi}{10} = -\frac{\varphi}{2}$
$\cos\frac{16\pi}{10} = \frac{\varphi}{2}$
$\cos\frac{18\pi}{10} = \frac{\Phi}{2}$
$\cos\frac{20\pi}{10} = 1$

$36\sqrt{2} \approx 50.91168$

$u = 5 - \sqrt{15} = 1.1270167$
$\frac{u^2}{10} = u - 1 = 0.12701666$
$u - 1 = 0.1270196$

cf $\Phi^2 = \Phi + 1 =$
$W = \sqrt{\Phi} = 1.2720197$
$\frac{W}{10} + 1 = 1.12720196$

$\frac{(\alpha\mu)^2}{N} = \alpha\mu - 1$
$(\alpha\mu)^2 = 1.2702958$
$N = 9.9965044$

$\frac{X^2}{10} + 1 = \alpha\mu = 1.127074$
$X = 1.127271$

$\Phi = 1.618034$
$\sqrt{\Phi} = 1.2720197$
$\Phi^{1/4} = 1.1278385$
$\sqrt{\tan G} = 1.1278385$
$\tan G = 1.2720197$

$\sin^{-1}\varphi = 38^\circ 172908$
$\cos^{-1}\varphi = 51.827292 = G$
$\overline{90}$
Great Pyramid

$\tan^{-1}\Phi = 58.282526$
$\tan^{-1}\varphi = 31.717475$
$\overline{90}$

$31^\circ + 38^\circ = 69.^\circ 890183$
$\frac{1}{\sin G} = 1.2720197 = \tan G$
$\cos G = \sin^2 G = 1 - \cos^2 G$

$\tan G = 1.2720196 = \sqrt{\Phi}$
$\sqrt{\tan G} = 1.1278385$
$1.127074 = \alpha\mu$
0.000765

$\cos^2 G + \cos G - 1 = 0$
$x^2 + x - 1 = 0$
$\frac{-1 \pm \sqrt{1+4}}{2} = \varphi$

C0INTS

CONSPIRACY THEORIES

AND OTHER

BRIDGES TO NOWHERE

COINCIDENCES

CURIOSITIES

AND

CONSPIRACY THEORIES

THE UBIQUITOUS 1.127......

X	X^2
$5-\sqrt{15} = 1.127\,016\,654$	$1.270\,166\,538 \equiv 10(x-1)$
$\log_{10}(\alpha\mu) = 1.127\,074\,115$	$1.270\,296\,061$
$\Phi = \frac{1+\sqrt{5}}{2},\ \Phi^{1/4} = 1.127\,838\,486$	$1.272\,01965 = \Phi^{1/2}$
$\left(\frac{3^3}{2^2}\right)^{1/16} = \left(\frac{27}{4}\right)^{1/16} = 1.126\,750\,168$	$\left(\frac{27}{4}\right)^{1/8} = 1.269\,588\,476$ relvel max
$V = 1.3198824$ $\left[\log_{10}\left(\frac{1}{\log_{10} V}\right)\right]^{1/2} = 1.126\,475\,516$	$1.268\,879\,501 = \log_{10}\left(\frac{1}{\log_{10} V}\right)$
Cube +6 caps $\frac{8(1-\sqrt{3})}{3} = 1.127\,065\,949$	$1.270\,277\,653$
Cycloid $\sqrt{\frac{L}{B}} = 1.128\,379\,167$	$1.273\,23945 = \frac{L}{B} = \frac{8a}{2\pi a} = \frac{4}{\pi}$

0.916079 $\sqrt{13}$ $\sqrt{11}$
0.916025 $-\Phi$ $\sqrt{35}$

$(\alpha\mu)^3 + \Phi = 4.999256$ log
$\simeq 5$ $\delta = 0.000744$

$\left[\frac{5-\Phi}{3}\right]^4 = 1.615072$

$\frac{5-\Phi}{3} = 1.127322$

$\Phi^{1/4} = 1.127838$

Extend to ± 25

PRODSUM2.WPD 9 October ~~5~~ 2005

PRODSUM PAIRS PART II

Prodsum pairs are pairs of numbers [x,y] whose sum is equal to their product:

$$x + y = x \cdot y = p$$

In terms of p, $x = [p + \sqrt{(p^2 - 4p)}]/2$ and $y = [p - \sqrt{(p^2 - 4p)}]/2$

TABLE 1. gives the values of the prodsum pairs corresponding to some integer values of p.

TABLE 1.

p	y	x	$y^2/2$	$x^2/2$	√	
-6	-6.872983	0.872983	23.618947	0.381050	60	-10 p
-5	-5.854101	0.854102	17.135255	0.364745	45	-9 p
-4	-4.828427	0.828427	11.656853	0.343146	32	-8 p
-3	-3.791288	0.791288	7.186932	0.313068	21	-7 p
-2	-2.732051	0.732051	3.732051	0.267949	12	-6 p
-1	-1.618034	0.618034	1.309017	0.190983.	5	-5 p
+4	2	2	2	2	0	
+5	1.381966	3.618034	0.954915	6.545085	5	p
+6	1.267949	4.732051	0.803847	11.196153	12	2 p
+7	1.208712	5.791288	0.730492	16.769508	21	3 p
+8	1.171573	6.828427	0.686291	23.313708	32	4 p
+9	1.145898	7.854101	0.656541	30.843459	45	5 p
+10	1.127017	8.872983	0.635083	39.364917	60	6 p

- The √ column gives the values of $\sqrt{(p^2 - 4p)}$ ↓ ? 0
- The values of x and y are imaginary for p = 1, 2, and 3 and = 0 for p = 0.
- For p = +5, $x = 3 - \Phi$ and $y = 2 + \Phi$; for p = -1, $x = \Phi - 1$ and $y = -\Phi$
- Note that for all p, $(x^2 + y^2)/2 = p\cdot(p-2)/2$; and $x^2 \cdot y^2/4 = p^2/4$
- There are several correspondences between the "plus p's" and the "minus p's"

  Corresponding p's are those whose sum = 4, e.g. p = +10 corresponds to p = - 6

  For corresponding p's the following hold:

  x(+) + y(-) = 2 ; e.g. x(+9) + y(-5) = 7.854101 - 5.854101 = 2

  y(+) + x(-) = 2 ; e.g. y(+6) + x(-2) = 1.267949 + 0.732051 = 2

  x(+) - x(-) = [p(+) - p(-)]/2

  e.g. x(+7) - x(-3) = 5.791288 - 0.791288 = 5

  and [(+7) - (-3)]/2 = 5

∃ many relations between −6 and +10

$3y_{10} = 3 + \frac{x^2}{2} - 6$

$-y_{-6} + y_{+10} = 8$

lim y = 0

x = p

$8 + x_{-6} = x_{10}$

MORE ON THE UBIQUITOUS # 1.127...

- $\log_{10}(\alpha\mu) = 1.127\,074\,115$, squared $= 1.270\,296\,061$
- $A = 5-\sqrt{15} = 1.127\,016\,654$, squared $= 1.270\,166\,538 = A^2 = 10(A-1)$

- Special Relativity

$\ell = L\sqrt{1-\frac{v^2}{c^2}}$, $t = \frac{T}{\sqrt{1-\frac{v^2}{c^2}}}$, $v = \frac{L}{T}$ $S = \frac{\ell}{t}$, the relativistic velocity

$S = \frac{L}{T}\left(1-\frac{v^2}{c^2}\right) = \frac{L}{T}\left(1-\left(\frac{L}{T}\right)^2\cdot\frac{1}{c^2}\right) = \frac{L}{T} - \left(\frac{L}{T}\right)^3\frac{1}{c^2}$ or $v - \frac{v^3}{c^2}$

$S = v\left(1-\frac{v^2}{c^2}\right)$ if $v=0$, $S=0$, if $v=c$, $S=0$

$\Rightarrow$ in between $\exists$ a maximum S

represent $v = ac$, then $S = c(a-a^3)$
$a \le 1$

max S

$\frac{dS}{da} = c(1-3a^2)=0$ or $a = \frac{1}{\sqrt{3}}$, $S = \frac{2}{3}\frac{c}{\sqrt{3}} = 0.384\,900\,1796$

$S = \sqrt{\frac{4}{27}}\,c$

i.e. the maximum relativistic velocity is $\frac{2}{\sqrt{3}^3}c = 0.384\,900\,179\,c$

$\hat{a} = \frac{2}{\sqrt{3}^3}$, $\frac{1}{\sqrt[4]{\hat{a}}} = 1.269\,688\,476 = \left(\frac{27}{4}\right)^{1/8}$

$\frac{1}{\sqrt[8]{\hat{a}}} = 1.126\,750\,168 = \left(\frac{3}{2}\right)^{1/8} 3^{1/16} = \left(\frac{27}{4}\right)^{1/16}$

- VISWANATH NUMBER [Math NB#2] SCIENCE NEWS JUNE 12, 1999 p376 vol 155

$V = 1.131\,988\,24$, $\log_{10}\left[\frac{1}{\log V}\right] = 1.268\,879\,501$

$\sqrt{\ } = 1.126\,445\,516$

$A^2 \rightarrow 1.131\,573\,036$

Reverse Special Relativity

$s = v[1-s^2/c^2]$, $s^2 + \frac{c^2}{v}s - c^2 = 0$, $s = \frac{-\frac{c^2}{v} \pm \sqrt{\frac{c^4}{v^2}+4c^2}}{2}$

if $v=c$, $s = c\left(\frac{-1\pm\sqrt{5}}{2}\right)$, $s = -\Phi c$, ϕc

- $\sqrt{\Phi} = 1.272\,019\,65$

$\sqrt[4]{\Phi} = 1.127\,838\,486$

also

$\frac{8(1-\sqrt{3})}{3} = K$

cube, edge $\frac{2}{\sqrt{3}}$, six caps

$\frac{8}{3^{3/2}}(\sqrt{3}-1) = 1.127\,065\,949 = K$

$K^2 = 1.270\,277\,653$

O

NUM127.WPD September 30, 2007 Redo

THE UBIQUITOUS NUMBER 1.127 XXX

Φ = 1.61803398874989484820458683436563

$\sqrt{\Phi}$ = 1.27201964951406896425242246173749 $\sim (5-\sqrt{15})^2$

$1 + \sqrt{\Phi}/10$ = 1.12720196495140689642524224617375 $\Phi^{1/4} = 1.127\ 838\ 5$

$(1+\sqrt{\Phi}/10)^2 = 1.2705841$

The volume common to a cube of edge = $2/\sqrt{3}$ plus six "cylinder caps" of radius = 1 $(\alpha\mu)^3 = 3,381222\ 345$

$\delta = 0.000244$ $8(1 - 1/\sqrt{3})$ = 3.38119784648299388392680975598 $\pi(\alpha\mu)^3 = 3.381\ 222\ 342$

$(1.127)^2 = 1.270$

$8(1 - 1/\sqrt{3})/3$ = 1.12706594882766462797560325199 $(1.270)^2 = (1.127)^4 = 1.613$

$[8(1 - 1/\sqrt{3})/3]^2$ = 1.27027765300680394179580993656 $\delta = 0.000008$

$1 + [8(1 - 1/\sqrt{3})/3]^2/10$ = 1.12702776530068039417958099366

$5 - \sqrt{15}$ = 1.12701665379258311482073460022 $\delta = 0.0000575$ $25 + (\alpha\mu)^2 = 80$ $= 79.981$

$(5 - \sqrt{15})^2$ = 1.27016653792583114820734600218 $\alpha\mu = 5 - \sqrt{15}$

$1 + (5 - \sqrt{15})^2/10$ = 1.12701665379258311482073460022 $S = 5(4 + \sqrt{15})$

$\log_{10}$(cgs) values:

fine structure constant
α = −2.136 834 673

proton mass	electron mass	ratio
m_p = −23.776 602 304	m_e = −27.040 511 092	$m_p/m_e = \mu$ = 3.263 908 788
electron radius	planck length	planck mass
r_e = −12.550 068 214	l_o = −32.791 340 829	m_o = −4.662 403 804

$M = m_o/m_p$ = 19.114 198 500 ; $L = r_e/l_o$ = 20.241 272 615

$L - M$ = 1.127 074 115 = A; $L + A$ = 21.368 346 730 = -10α

$A - \alpha$ = 3.263 908 788 = μ; $L = -10\alpha - \alpha - \mu = -11\alpha - \mu$

$M = L - A = -12\alpha - 2\mu$; $S = L + M$ = 39.355 471 115 = $-23\alpha - 3\mu$

$\boxed{\alpha\mu\left(\frac{m_0}{m_r}\right)^2 = S = \left(\frac{r_e}{l_0}\right)^2\frac{1}{\alpha\mu}} \Rightarrow m_0 l_0 = \frac{\hbar}{c} = \frac{m_p r_e}{\alpha\mu}$ 40

PRODSUM3.WPD October 17, 2005

PARALLELS BETWEEN A RECURSION FORMULA AND THE VALUES OF ~~THREE~~ FUNDAMENTAL CONSTANTS OF PHYSICS.

pure number

$A_{n+2} = 10A_{n+1} - 10A_n$ has the charasteric equation, $x^2 - 10x + 10 = 0$, whose solutions are $x = 5 - \sqrt{15}$ and $y = 5 + \sqrt{15}$; with numerical values : $x = 1.1270167$ and $y = 8.8729833$

$y^2/2 = 39.3649167$

$\log_{10}$ values of three fundamental constants:
The fine structure constant $\alpha = -2.1368346$
The proton/electron mass $\mu = +3.2639088$
with $\alpha\mu = 1.1270742$
The coulomb/gravity force $S = 39.3558802$ $= (\alpha\mu)\left(\frac{m_0}{M_p}\right)^2 = \left(\frac{r_e}{l_0}\right)^2\frac{1}{\alpha\mu}$
with $\sqrt{(2S)} = 8.8719649$

$x + y = 10$
$x \cdot y = 10$
$y - x = \sqrt{60} = 7.7459667$
$(x + y) / (x \cdot y) = 1$

$\alpha\mu + \sqrt{(2S)} = 9.9990391$
$\alpha\mu \cdot \sqrt{(2S)} = 9.9993627$
$\sqrt{(2S)} - \alpha\mu = 7.7448907$
$[\alpha\mu + \sqrt{(2S)}] / [\alpha\mu \cdot \sqrt{(2S)}] = 1.0000324$

$(x^2 + y^2)/2 = 40$
$x^2/2 \cdot y^2/2 = 25$

$(\alpha\mu)^2/2 + S = 39.9910283$
$(\alpha\mu)^2/2 \cdot S = 24.9968136$

$\alpha\mu/x = 1.0000510$
$(y^2/2) / S = 1.0002296$
$y / \sqrt{(2S)} = 1.0001148$

$\alpha\mu - x = 0.0000575$
$y^2/2 - S = 0.0090365$
$y - \sqrt{(2S)} = 0.0010184$

The explicit formula for the values of A_n is
$A_n = (y^n - x^n)/(y - x)$
This formula leads to the following series:
$A_0 = 0$
$A_1 = 1$
$A_2 = 10$
$A_3 = 90$
$A_4 = 800$

An explicit formula for the values of C_n is
$C_n = \{[\sqrt{(2S)}]^n - (\alpha\mu)^n\}/[\sqrt{(2S)} - \alpha\mu]$
giving the following series:
$C_0 = 0$
$C_1 = 1$
$C_2 = 9.9990390$
$C_3 = 89.9814202$
$C_3 = 799.7437196$

The many parallels between the fundamental physical constants $\alpha\mu$ and S with the solutions of the recursive equation $A_{n+2} = 10A_{n+1} - 10A_n$ suggest that some form of "continental drift" may be occurring. It has been proposed by several [see Dirac, 1935] that the fundamental constants do vary in time. It may be that the original values of $\alpha\mu$ and S were 1.1270167 and 39.3949167, respectively and have drifted over 13 billion years to their present values of 1.1270742 and 39.3558802. [$\alpha\mu$ increasing and S decreasing]. However, the drift may be in the opposite direction with the present values converging to the $5 \pm \sqrt{15}$ values. [$\alpha\mu$ decreasing and S increasing]. Was there a formation & mathematical template from which the universe has diverged, or is the universe converging toward a formal mathematical template? or oscillating around a template?

or a local terrestrial effect on our measurements

$$u \cdot v = 10$$

$$\frac{1}{u} = \frac{v}{10}$$

$$\frac{1}{v} = \frac{u}{10}$$

$$\frac{1}{u} + \frac{1}{v} = \Gamma$$

$$v = \frac{10}{u}$$

$$\frac{v^2}{2} = \frac{50}{u^2}$$

$$S = \frac{50}{(\alpha\mu)^2} = \alpha\mu \cancel{\frac{G m_p^2}{\hbar c}} \frac{\hbar c}{G m_p^2}$$

$$\cancel{(\alpha\mu)^3 \frac{G m_p^2}{\hbar c} = 50 = (\alpha\mu)^3 \frac{m_p^2}{m_0^2}}$$

$$\boxed{(\alpha\mu)^3 \cdot \frac{m_0^2}{m_p^2} = 50}$$

$$m_p = \frac{(\alpha\mu)^{3/2}}{\sqrt{50}} \cdot m_0 = \sqrt{\frac{(\alpha\mu)^3}{50}}\, m_0$$

Approximations vs Coincidences

Intent Accident

REDIMEN1.WPD February 4, 2007

THE $Z_{n+2} = 10\,Z_{n+1} + B\,Z_n$ CONSPIRACY THEORY

$$Z_{n+2} = 10\,Z_{n+1} + B\,Z_n \longrightarrow z^2 - 10z - B = 0$$
$$z = 5 \pm \sqrt{(25 - B)} \qquad B \le +25$$

The values of the fundamental physical constants, α the fine structure constant, μ the ratio of proton mass to electron mass, and S the ratio of coulomb force to gravity are $\log_{10}$(cgs) values. all [o]

B = 10

$5 - \sqrt{15}$	=	1.127017	$\alpha + \mu$	=	1.127074	$\delta = 0.000057$
$5 + \sqrt{15}$	=	8.872983	$10/(\alpha + \mu)$	=	8.872532	$\delta = 0.000451$

B = 22

$5 - \sqrt{3}$	=	3.267949	μ	=	3.263909	$\delta = 0.004040$
$5 + \sqrt{3}$	=	6.732051	$22/\mu$	=	6.740384	$\delta = 0.008333$

from above

$\sqrt{3} - \sqrt{15}$	=	–2.140933	α	=	–2.136835	$\delta = 0.004098$
~~$\sqrt{3} + \sqrt{15}$~~	~~=~~	~~5.605033~~	~~$-12/\alpha$~~	~~=~~	~~5.615782~~	~~$\delta = 0.010749$~~
$(5 + \sqrt{15})^2/2$	=	39.364917	S	=	39.355478	$\delta = 0.009439$

Since the values of the δ's differ, there is clearly no constant difference between the measured values and the solutions to the equations $z^2 - 10z - B = 0$. Further, there is no constant factor relating the values of these roots to measured values, nor is there a constant exponential or power relation. The differences between the recursion equation roots and the measured values may be due to local conditions. That is, the "earth measured" values may differ from those that would be found when measured in low density space. Or perhaps the measured values have drifted over time in an irregular manner from some original template like a recursion equation such as $Z_{n+2} = 10\,Z_{n+1} + B\,Z_n$. But most likely, the approximations are only one of those curious coincidences.

A Special Case

The measured value of μ is 3.263 908 788;

$$5 - \sqrt{3} = 3.267\,949$$

but $5 - \sqrt{3} - 4/990 = 3.263\,908\,788$

is correct to nine decimal places.

Superseded

REDIMEN1.WPD February 4, 2007

THE $Z_{n+2} = 10\,Z_{n+1} + B\,Z_n$ CONSPIRACY THEORY

$$Z_{n+2} = 10\,Z_{n+1} + B\,Z_n \longrightarrow z^2 - 10z - B = 0$$
$$z = 5 \pm \sqrt{(25 - B)} \qquad B \le +25$$

$5 - \sqrt{15} = 1.127017$	$\alpha + \mu = 1.127074$	$\delta = 0.000057$	$\left.\right\}$
$5 - \sqrt{3} = 3.267939$	$\mu = 3.263909$	$\delta = 0.004040$	
$\sqrt{3} - \sqrt{15} = -2.140933$	$\alpha = -2.136835$	$\delta = 0.004098$	
$5 + \sqrt{15} = 8.872983$	$10/(\alpha + \mu) = 8.872532$	$\delta = 0.000451$	
$5 + \sqrt{3} = 6.732051$	$22/\mu = 6.740384$	$\delta = 0.008333$	
$\sqrt{3} + \sqrt{15} = 5.605033$	$-12/\alpha = 5.615782$	$\delta = 0.010749$	

Special Case 1) $Z_{n+2} = 10\,Z_{n+1} - 10\,Z_n$

$p = 5 - \sqrt{15} = 1.127017$; $q = 5 + \sqrt{15} = 8.872983$

$\alpha + \mu = 1.127074$; $q^2 = 78.729833$

$\delta = 0.000057$; $S^2 = 78.710956$

$\delta = 0.018877$

Special Case 2) $Z_{n+2} = 10\,Z_{n+1} - 22\,Z_n$

$P = 5 - \sqrt{3} = 3.267949$; $Q = 6.732051$

$\mu = 3.263909$;*[1] $\sqrt{3} - \sqrt{15} = -2.140933$

$\delta = 0.004040$; $(\alpha + \mu) - \mu = \alpha = -2.136835$

$\delta = 0.004098$

Special Case 3) $(\sqrt{3} - \sqrt{15})(\sqrt{3} + \sqrt{15}) = -12$

$R = (\sqrt{3} + \sqrt{15}) = 12/(\sqrt{15} - \sqrt{3}) = 5.605033$ $\qquad \sqrt{2}(5 + \sqrt{15}) = 12.548293$

$R^2/3 = 10.472132$ **[2] $\qquad$ re 12.550068

$c = 10.476821$ $\qquad \delta$ $0{,}001775$

$\delta = 0.004689$

---

[1]* The measured value of μ is 3.263 908 788; while $5 - \sqrt{3} - 4/990 =$ 3.263 908 788 correct to nine decimal places. $\delta = 0.000\,000\,000$

[2]** This "numerical coincidence" involves a pure number vs c, which has the dimensionality of [L/T]. The other approximations are between pure numbers.

δ 0.000057

$\alpha\mu = 1.127074$

$\delta = 39.355478$

$5-\sqrt{15} = 1.127017$

$5+\sqrt{15} = 8.872983$

$10 - \alpha\mu = 8.872926$

$\frac{(5+\sqrt{15})^2}{2} = 39.364917$

$\frac{(10-\alpha\mu)^2}{2} = 39.364408 \quad \delta = 0.000509$

$\delta = 39.355478$

$\sqrt{2\delta} = 8.8719195$

$10-\sqrt{2\delta} = 1.1280805$

$a = \log \log (\alpha\mu) = -1.284394$

$A = \frac{a}{10} - 28 = -28.128439$

$\frac{C^2}{G} = 28.128945$

~~$A = \log \log (\alpha\mu) - 3^3 = -28.128394$~~

~~$B = \log \log (5-\sqrt{15}) - 3^3 = -28.128$~~

$\frac{C^2}{G} + A = + 0.000551$

$b = \log \log (5-\sqrt{15}) =$

$B = \frac{b}{10} - 28, \quad b - 1.128579$

$\frac{C^2}{G} + B = + 0.000366$

Part I 1998 #40
Part III 2004 #57

O

NUMAPRX2.WPD June 2, 2004

SOME NUMERICAL APPROXIMATIONS II

Measured values: $\alpha = 0.007297353$, $1/\alpha = 137.0359895$

$\log_{10} S^{-1} = Gm_e m_p/\alpha c\hbar = 39.355882$

where	$G = 6.67259$	Cgs $\log_{10}$ -7.175706
	$m_e = 9.1093897$	-27.04051072
	$m_p = 1.6726231$	-23.77660191
	$\hbar = 1.05457266$	-26.97692349
	$\alpha = 0.00729735$	-2.13683465
	$c = 299\,792\,458$	10.47682070

$m_p/m_e = 1836.152756$, $6\pi^5 = 1836.118109$, $\delta = 0.034647$, $Q = 1.0000189$

The following approximations or "coincidences" from P.L. Kannappan:

Define $\omega = \pi^4 \ln 4 = 135.0376736$, $\omega + 2 = 137.0376736$, $\delta = 0.001684$, $Q = 1.0000118$

$\alpha = 1/(\omega + 2) = 0.007297263$ $\delta = 0.00000009$, $Q = 1.0000123$

$S = 2^\omega / 2\pi^2 = 2.264960107 \times 10^{39}$, Log S = 39.355060557, $\delta = 0.000821$, $Q = 1.0000208$

$\Phi = 1.6180339887$, $2 - 1.2/\pi = 1.618028$, $\delta = 0.000006$

---

from NUMAPROX.WPD 1998 # 40 e =2.718281828

$e\,\Phi/\pi \approx 7/5$, $\Phi^{-1/2} \approx \pi/4$,

eliminating Φ , $e = 7\pi^3/80 = 2.71305$

Eliminating π , $e = \Phi^{-3/2}\, 28/5 = 2.70862$

BOB WILLIAMS
$6\Phi^2$ to 5π

$6\Phi^2 = 15.70820393$
$5\pi = 15.70796327$
$\Delta = 0.00024066$
ratio = 1.000015321

$10^5 / 9^3 = 137.1742$ $Q = 1.001009$

$\sqrt{51} = 7.1414284$, $\sqrt{2} = 1.4142136$, $10(\sqrt{51} - 7) - \sqrt{2} = 0.000070$ $Q = 1.0000495$

SPECNUMB.WPD March 26, 2007

c^n

10.476 820 7029
20.953 641 4058
31.430 462 1087
41.907 282 8116
52.384 103 5145
62.860 924 2174
73.337 744 9203
83.814 565 6232

1.127 016 6538	$= 5 - \sqrt{15}$	$\simeq$	$\alpha\mu$
8.872 983 3462	$= 5 + \sqrt{15}$	$\simeq$	$\sqrt{2S}$
78.729 833 4620	$= (5 + \sqrt{15})^2$	$\simeq$	2S
39.364 916 7310	$= (5 + \sqrt{15})^2/2$	$\simeq$	S
12.548 293 3869	$= \sqrt{2}\,(5 + \sqrt{15})$	$\simeq$	r_e
-2.140 932 5386	$= \sqrt{3} - \sqrt{15}$	$\simeq$	α
3.267 949 1924	$= 5 - \sqrt{3}$	$\simeq$	μ
~~10.472 135 9550~~ $6 + \sqrt{20}$	~~$= (\sqrt{3} + \sqrt{15})^2/3$~~	$\simeq$	c
39.215 390 3092	$= 12(5 - \sqrt{3})$	$\simeq$	S

product of $\sqrt{\ }$ $\Rightarrow$ [2] or [illegible] etc

$$\frac{3 + 2\sqrt{45} + 15}{3} = 6 + 2\sqrt{5}$$

$\cancel{6 + \sqrt{20}}$

$6 + \sqrt{20}$

10.476821
10.472136 c
$\delta =$ 0.004685

$\therefore$ meaningless

"Close fit Game"

49.241 448 3887	=	$23(\sqrt{3} - \sqrt{15})$
9.803 847 5773	=	$3(5 - \sqrt{3})$
39.437 600 8114	=	Difference

RATIOS.WPD March 27, 2007

		Δ	$\frac{1}{\Delta}$		
-2.136 834 6726	$\log_{10}(\text{cgs})$	1.001 917 7272	0.998 085 9434	α	
-2.140 932 5386	$\sqrt{3} - \sqrt{15}$				
3.263 908 7879	$\log_{10}(\text{cgs})$	0.998 763 6269	1.001 237 9036	μ	
3.267 949 1924	$5 - \sqrt{3}$				
1.127 074 1153	$\log_{10}(\text{cgs})$	1.000 050 9855	0.999 949 0176	$\alpha\mu$	
1.127 016 6538	$5 - \sqrt{15}$				
-12.550 068 2143	$\log_{10}(\text{cgs})$	1.000 141 4397	0.999 858 5803	r_e	X ? pure#? a second √
-12.548 293 3869	$[\sqrt{2}\,(5 + \sqrt{15})]^{-1}$				→ [L]
39.355 471 4061	$\log_{10}(\text{cgs})$	0.999 760 0573	1.000 240 0003	S	
39.364 916 7310	$(5 + \sqrt{15})^2/2$				
~~10.476 820 7029~~	~~$\log_{10}(\text{cgs})$~~	~~1.000 447 2536~~	~~0.999 552 8464~~	~~c~~	X
~~10.472 135 9550~~	~~$(\sqrt{3} + \sqrt{15})^2/3$~~				
-2.136 834 6726	$\log_{10}(\text{cgs})$	1.000 053 4021	0.999 946 6008	α	
-2.136 720 5672	$-\log_{10}(137)$				
39.355 471 4061	$\log_{10}(\text{cgs})$	1.003 572 0949	0.996 440 6195	S	
39.215 390 3092	$12(5 - \sqrt{3})$				
39.355 471 4061	$\log_{10}(\text{cgs})$	0.997 917 4847	1.002 086 8612	S	
39.437 600 8114	$23(\sqrt{3} - \sqrt{15}) - 3(5 - \sqrt{3})$				

COSMIC CURIOSITIES PART II

VALUES MEASURED ON EARTH

$\log_{10}(\alpha\mu) = 1.127074$

$\log_{10} S = 39.355880$

Where α = the fine structure constant
μ = the proton/electron mass ratio
S = the coulomb/gravity force ratio
$= \hbar\alpha c/Gm_e m_p = \alpha\mu\, m_o^2/m_p^2$

ROOTS OF THE RECURSIVE EQUATION $A_{n+2} = 10\,A_{n+1} - 10\,A_n$

$q = 5 - \sqrt{15} = 1.1270166..$
$p = 5 + \sqrt{15} = 8.8729833...$
$p^2/2 = 5(4 + \sqrt{15}) = 39.364917$

Explicit Formula:
$A_n = (p^n - q^n) / (p - q)$
$(p + q)^n = (p \times q)^n = 10^n$

$\log_{10}(\alpha\mu) - q = 0.000057 \quad \log_{10}(\alpha\mu)/q = 1.000051$

$p^2/2 - \log_{10} S = 0.009035 \quad p^2/2 \log_{10} S = 1.000230$

see 2003#40, 2004#39, 2004#57

TWO TERRESTRIAL CYCLES

		Value in seconds	$\log_{10}$ value in seconds
T	The Schuster Period	5060.24	3.704171
D	The mean solar day	86400.00	4.936514

The Schuster period is determined by the mass M and radius R of the earth and is the time period in which a satellite would circle a spherical earth at its surface were there no atmosphere or other obstructions. The above values are derived from a mean earth radius 6.371000 x 10^8 cm and Earth mass of 5.9737 x 10^{27} g [Cox, Astrophysical Quantities 1999];G = 6.674215 x10^{-8} $cm^3/g\,s^2$ [Physics Today July 2000 p 21]

= −7,175600

$T = 2\pi\sqrt{(R^3/GM)}$

MSNG = −7.175 256

redo with new G

Note that $\log_{10}(T)/\log_{10}(D) = 0.750361$

$\frac{\hbar \alpha M}{c^3 m_p^2}$

$\frac{SG}{c^3} = 0.749712 \approx \frac{3}{4}\left[\frac{T}{M}\right]$

which to about 4 parts in 10^4 is equal to 3/4. $\frac{\log D}{\log T} = 1.3326919$

$\frac{c^3}{SG} = 1.3338455$

Hence, $T^4 = D^3$

see 1991#88, 1994#7, 1994#13, 1994#15, 2000#22, 2000#43

$-1.6675806445 = \alpha^{13}\mu^8 = -\frac{5}{3}$

$\alpha^3\mu^{5/2} = 1.749267$

$\frac{3}{5} = 0.6$

An analogy with Music

Just Intonation Scale $\sim$ Template.

2 x freq. = Octave $\sim$ $\sqrt{5}$

note on 3rds, 5ths etc $\alpha\mu$

Equal Temperament $\sim$ sequence

2 x f = Octave

octave $5+\sqrt{15} \sim \sqrt{5} = \frac{(5+\sqrt{15})^2}{4} = 19.682458$

note $\sqrt[12]{2}$

note $\frac{5-\sqrt{15}}{2} \sim \sqrt{\alpha\mu}$

.563 508

20.245966

19.118950

$\log S = 39.355880$
$\times 2 = 78.711760$
$\sqrt{\ } = 8.8719648$
+ $\alpha\mu$ 1.127074
9.999039
$(\alpha\mu) \times \sqrt{25} = 9.999361$

value of G!

#

COSCUR2.WPD

January 24, 2005

COSMIC CURIOSITIES PART II

VALUES MEASURED ON EARTH

$\log_{10}(\alpha\mu) = 1.127074$ = B

$A^2 \times (B-1) = 10.002$ $\log_{10} S = 39.355880$ = A

Δ's are like beat periods

Where α = the fine structure constant
μ = the proton/electron mass ratio
S = the coulomb/gravity force ratio
$= \hbar\alpha c / G m_e m_p = \alpha\mu\, m_o^2/m_p^2$

each basic dimensionless

ROOTS OF THE RECURSIVE EQUATION
$A_{n+2} = 10\,A_{n+1} - 10\,A_n$

$q = 5 - \sqrt{15} = 1.1270166..$
$p = 5 + \sqrt{15} = 8.8729833...$ $p^2 = 78.729833$
$p^2/2 = 5(4 + \sqrt{15}) = 39.364917$
$= 5(p-1)$

Explicit Formula:
$A_n = (p^n - q^n) / (p - q)$
$(p + q)^n = (p \times q)^n = 10^n$

$p^2(q-1) = 10$

$\log_{10}(\alpha\mu) - q = 0.000057$ $\log_{10}(\alpha\mu)/q = 1.000051$

$p^2/2 - \log_{10} S = 0.009035$ $p^2/2\ \log_{10} S = 1.000230$

beat

G = -7.175303

3.704122
4
14.816488

see 2003#40, 2004#39, 2004#57

$\div$ 0.750356

TWO TERRESTRIAL CYCLES

14.816488
14.809542
0.006946

4.936514
3
14.809542

		Value in seconds	$\log_{10}$ value in seconds
T	The Schuster Period	5060.24	3.704171
D	The mean solar day	86400.00	4.936514

The Schuster period is determined by the mass M and radius R of the earth and is the time period in which a satellite would circle a spherical earth at its surface were there no atmosphere or other obstructions. The above values are derived from a mean earth radius 6.371000 x 10^8 cm and Earth mass of 5.9737 x 10^{27} g [Cox, Astrophysical Quantities 1999];G = 6.674215 x10^{-8} $cm^3/g\ s^2$ [Physics Today July 2000 p 21]

$$\tau\ \cancel{D} = 2\pi\sqrt{(R^3/GM)}$$

Note that $\log_{10}(T)/\log_{10}(D) = 0.750361$

which to about 4 parts in 10^4 is equal to 3/4.

Hence, $T^4 = D^3$

Sch^4 = rot^3

re-check

2192832 sec
⊙rot = 25.38 day (Allen)
⊙Sch = 10003.7539 sec
ratio = 219.201
log = 2.3408
$\doteq \frac{7}{3}$

see 1991#88, 1994#7, 1994#13, 1994#15, 2000#22, 2000#43

check $D^{3/2} = \frac{1}{(G\rho)}$

⊕ rot^3 = Sch^4
⊙ rot^3 = Sch^7

for ⊙ i.e. rot^3 = S^7

New G − 7.175303

S 39.355478

S^2 78.127074

$S^2(0.127074) \approx 10.002103$

What change in α would be required to bring $\overset{\alpha_0}{1.127074} \to \overset{\alpha_m}{1.1270166}$?

$\frac{17}{0.00005?}$

↓ a decrease of 6 parts in 100,000

$\tau_{\oplus} = 2\pi\sqrt{\frac{R^3}{GM}}$

$\bar{R}_{\oplus} = 8.8042076$

3

26.4128228

$M_{\oplus} = 27.7762434$ } from other side

-7.175303

20.600940

26.412823

$2 | 5.811883$

2.905942

$\log 2\pi$ 0.798180

3.704122

$S = \frac{G m_p m_e}{e^2} = \frac{G m_p m_e}{\hbar c \alpha} = \frac{G m_p^2}{\hbar c \alpha_\mu}$

Using $\alpha = 1.127017$ gives

↑ $S =$

$S_0 = \frac{P_0}{\alpha_0}$ $S_\nu = \frac{P_0}{\alpha_m}$ $\frac{S_m}{S_0} = \frac{\alpha_0}{\alpha_m}$ $S_n = \frac{\alpha_0}{\alpha_m} S_0$

$1.000051 \times S_0$

$= 39.360791$

39.364917

0.004126

S

4/1000

discriminant α, α_μ

$A_{n+2} = 10(A_{n+1} - A_n)$ ~ The "Template"

$\log A_{n+2} = 1 + \log(A_{n+1} - A_n)$

THE TEMPLATE FORMULA $\log\left(\frac{A_{n+2}}{A_{n+1} - A_n}\right) = 1$

COINTS

α, μ changing over 12 billion years – 2007 Year Book p.280

α 0.7 part in 10^5

S by 0.002 %

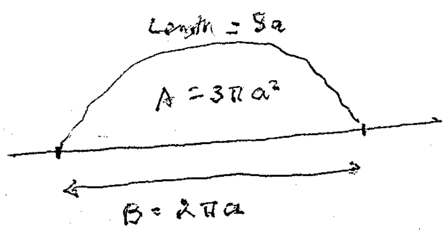
COINTS are numerical coincidents ~~where~~ in which several are mathematically related

REDIMEN2 – in C:\ MATHCAD

Add NUMAPRX4.WPD 2004

CYCLOID

$\frac{L}{B} = \frac{8}{2\pi} = \frac{4}{\pi} = 1.273\ 239\ 45$



a = radius

$\sqrt{\ } = 1.128\ 379\ 167$

 where?

PASCAL.WPD October 2, 2006

local validity of 11^n
but $(a+b)^n$ all n

(4)

POWERS OF ELEVEN			PASCAL TRIANGLE	
0	1	1	1	
1	11	2	1 1	
2	121	4	1 2 1	
3	1331	8	1 3 3 1	
4	14641	16	1 4 6 4 1	
5	161051	14	1 5 10 10 5 1	14
6	1771561	28	1 6 15 20 15 6 1	28
7	19487171	38	1 7 21 35 35 21 7 1	28
8	214358881	40	1 8 28 56 70 56 28 8 1	47
9	2357947691	43	1 9 36 84 126 126 84 36 9 1	80
10	25937424601	43	1 10 45 120 210 252 210 120 45 10 1	43
11	285311670611	41	1 11 55 165 330 462 462 330 165 55 11 1	86
12				127

16 1051 → 15 10 1051
17 71561 16 15 20 1561
16 15 20 1561

rule for
$11^n \to$ pascal
= ?

16105100
15101051
1004049

÷ 99.76

"There is no idea, however ancient or absurd, that is not capable of improving our knowledge."

Paul Feyerabend

The epistemological anarchist, Feyerabend, supports any source for obtaining hypotheses, even buying them from the leprechauns provided the price is right. The following is an attempt to find a hypotheses by putting two equations in juxtaposition: a well known arithmetic relation and Kepler's third law, with the hope that they will start a dialogue.

First, the arithmetic relation:

time aggregation   space aggregation   Prove by Mathematical Induction

$$(1+2+3+\ldots+n)^2 = 1^3+2^3+3^3+\ldots n^3$$

Next, Kepler's Third Law:

$$GM\,T^2 = R^3$$

A parallel is suggested when we adopt the following forms:

$$\frac{(\Sigma m)^2}{\Sigma m^3} = \frac{(\Sigma n)^2}{\Sigma n^3}$$

and,

$$\frac{T_m^2}{R_m^3} = \frac{T_n^2}{R_n^3}$$

If there is a dialogue, it says that both time and three dimensional space aggregate linearly, but the square root of space must be taken to obtain dimensional correspondence with time. Something here suggests that Pythagoras was right when he claimed that at the root of all physical laws are the properties of number.

$$\frac{(\Sigma n)^2}{\Sigma (n)^3} \sim \frac{T_n^2}{R_n^3} = \frac{1}{GM}$$