Roots of macro space and micro space.

ALΣXANDΣR; CEO SAND BOX GEOMETRY LLC

CSDA and roots

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If we divide our space into two infinities, we can use radius and curvature connection to construct Central Force energy fields. Let macro space be the realm of radius and micro infinity that of curvature and macro infinity dependent on micro infinity as potential. This paper studies the first three indices: ((index(0)radicand(n), index(1)radicand(n), and index(2)radicand(n)) operating on Cartesian number line integers serving as displacement radii with respect to Central Force spin. Using inverse exponents, I study parametric geometry of Central Force energy fields.

Exploring Sir Isaac Newton's S&T2 inverse square connection and curved space ME connection with human counting integer meter of 3-space, up, down, and around.

Pages: 20, 1800 words.

BIG SPACE SMALL SPACE CSDA: S&T1, S&T2, and S&T3. The Human Experience.

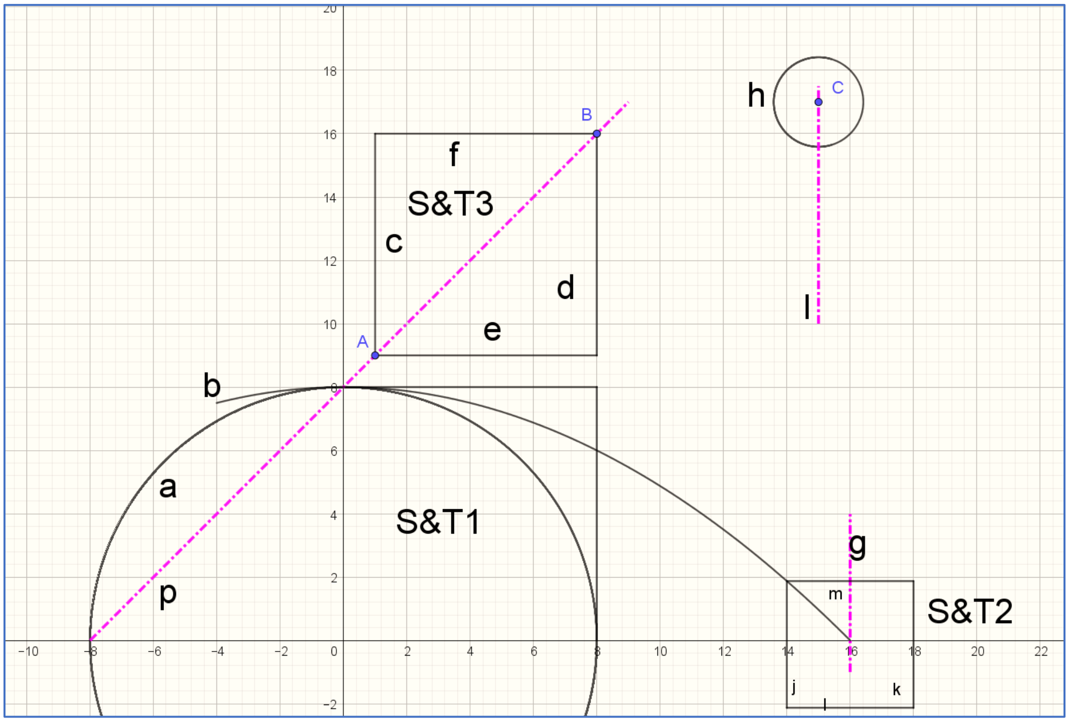


Figure 1: oxygen, Z#8, with three Human Experiance SpaceTime Squares. (h) is bond plane and (g) is nuclear gravity hook for spin and rotation assemblies. G2G, GeoGebra, MAA 22 MP4 poster script.

I invented this parametric geometry machine to explore the noise Space&Time has become. (a) is the independent curve, (b) dependent on potential of (a). Big space (a) reaches S&T2 via dependent (b) latus rectum, securing the average energy diameter of (M_2). Opens a door for curved space analytics using dependent curve (b) as a period time curve for (M_2).

The above construction includes nuclear S&T3. Sir Isaac's S&T2 is linked to potential of (a) by latus rectum (b), 16 units from spin. Galileo's S&T1, is the square wrapping surface acceleration curve (a) of our Earth. S&T1, explored by Galileo, finds dimension for our 1st Euclidean Space Time Frame. S&T1 Uniform Acceleration range of *this* **CSDA** construction, metered on spin is 8s, requiring 64 tiles. Each tile has spacetime coordinates of Earth: $(16ft, 1s)$. S&T3 is used to meter nuclear chaos of heat given us by late 19th – 20th century collective. Line (p) is a thermodynamic register used to meter change of state, Solid, Liquid, Gas, a causality of latent heat nuclear chaos.

I want to investigate happenings in curved space and square space when we take a counting integer as meter of displacement from spin, invert, change relative stature with Central Force Spin using exponent(2), providing analytical curves to analyze G-field Central Force motive energy happenings metered on period time curve (b).

$(M_1 M_2)$ comprising S&T2, is a SBG **CSDA** with independent curve (a) and dependent curve (b).

(e) is Sir Isaac's inverse sq connector, linking displacement integer (2) with curvature (1/2).

I will be exploring the rt triangle (ABC) locking central force ME of curved space potential found in micro infinity with displacement radii in macro infinity, curve (h), $\left(2^2 \leftrightarrow 2^{\frac{1}{2}}\right)$.

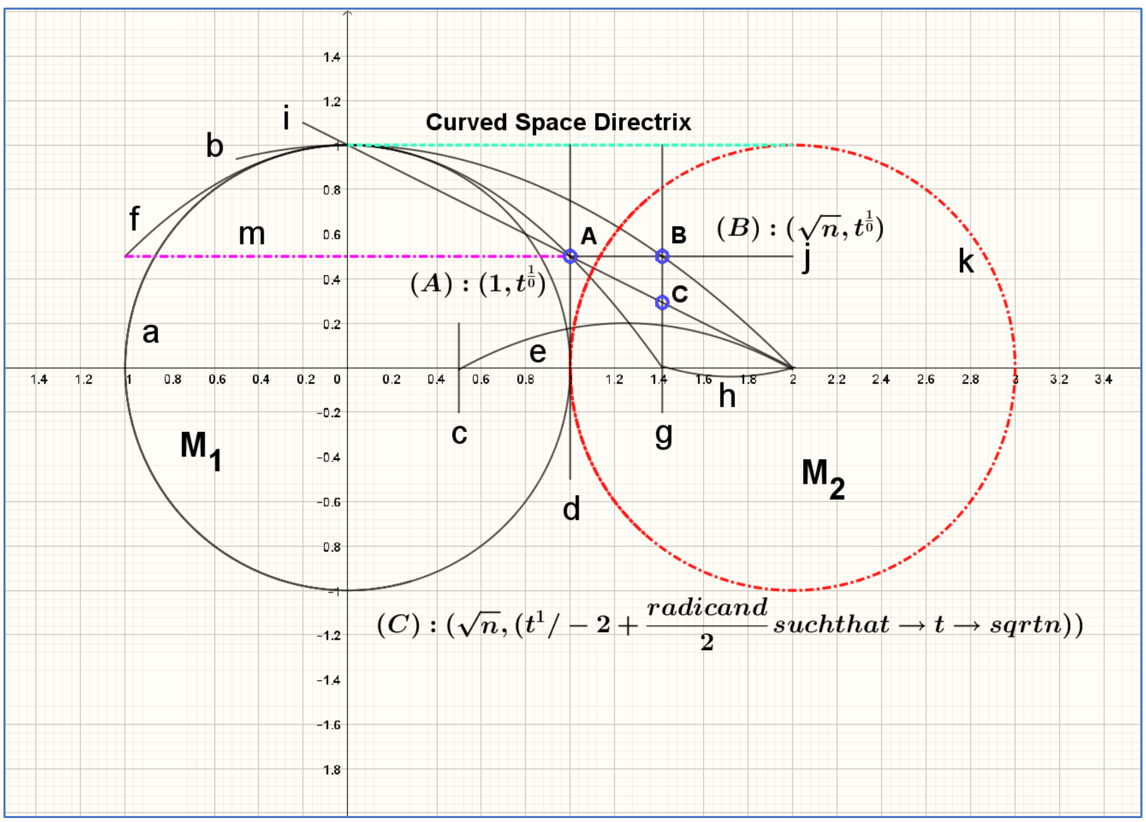


Figure 2: radicand(2) curved space and integer(2) square space and crossover coordinates of (A, B, C).

A word about right triangle (ABC). Right triangles are the geometry of our civilization. We are a right triangle species of intelligence. This triangle links the experience of being, our place with a macro space displacement integer(2), with micro infinity curvature $\left(\frac{1}{2}\right)$ buried in (M_1) potential via cross over boundary(d) separating our two infinities of being.

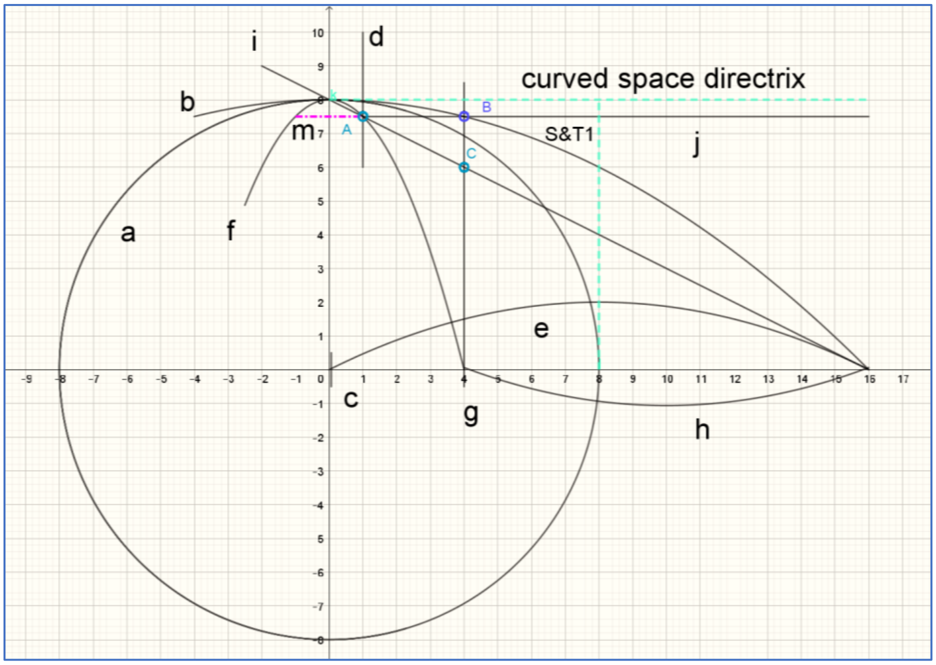
Pt. (A), $\left(1, 2^{\frac{1}{0}}\right)$, is rest energy of (M_1) on the LR chord (m), links (M_1) potential with motive energy of (M_2) on the period time curve (b) via point (B): $\left(\sqrt{n}, 2^{\frac{1}{0}}\right)$

The curve (m) is also the LR of $\left(\sqrt{2}\right)$ solution curve (f). Links ME of (M_1), $\left(2^{\frac{1}{2}}\right)$, with displacement integer(2^2) in square space, activating (M_2) period time curve (b). Linear solution curve (i) is the hypotenuse connection linking both legs with a right angle @ (B). hypotenuse end (A) connects boundary of micro infinity and macro infinite space with solution curve (i) @ $\left(2^{\frac{1}{0}}\right)$. hypotenuse end (B) links $\left(2^{\frac{1}{2}}\right)$ and $\left(2^{\frac{1}{0}}\right)$ on to the period time curve (b).

End point (C) registers radicand (displacement integer(2)) with $\left(2^{\frac{1}{2}}\right)$. Ordinate of (C), is found with a Wolfram template: $t\text{^}1/-2 + 2/2\,/.\,t \to \sqrt{2} \to\ 1 - \frac{1}{\sqrt{2}}$.

$$\left(\frac{t^1}{-2} + \frac{radicand}{2}\right)\ such\ that\ \left(t \to radicand^{\frac{1}{2}}\right).$$

Displacement integer(2), on the Domain of square space, completes Sir Isaac Newton's Universal Law. Macro space displacement radius(2) curvature is buried in the potential of (M_1) micro infinity: $\left(\frac{1}{2} \leftrightarrow 2\right)$. The macro space LR of a SBG **CSDA**, is the average diameter *and* average energy of (M_2) orbit.



INTEGER(16) square space, RADICAND(16) curved space. 64 units of space time wrapped around the surface acceleration curve (a). 8s as range and 8 units space on domain.

CONSTRUCTION PROTOCOL

1. (a): independent/discovery curve.
2. (b): dependent/definition curve.
3. (c): curvature value.
4. (d): domain unit (1) abscissa definition (1, t). Size of our human spacetime yardstick.
5. (e): inverse square connector. Sir Isaac's displacement (r) and its inverse $\left(\frac{1}{r}\right)$.
6. (f): solution curve $\left(\sqrt[2]{n}\right)$.
7. (g): abscissa ID $(\sqrt[2]{n})$.
8. (h): curved space ME connection: $\left(\sqrt{n} \leftrightarrow n^2\right)$.
9. (i): solution curve $(\sqrt[1]{n})$.
10. (j): solution curve $(\sqrt[0]{n})$.
11. (m): latus rectum for solution curve $\left(\sqrt[2]{n}\right)$.

POINTS: (A): + LR endpoint $\left(\sqrt[2]{n}\right)$ solution curve. (B): $\left(\sqrt[2]{n}\right), \left(\sqrt[0]{n}\right)$.

(C): $(\sqrt[2]{n}), (t\text{^}1/{-2} + n/2\ /.\ t \rightarrow \sqrt{n})$.
Spin axis pole(s) always common.

INTEGER(1) square space, radicand(1) curved space.

Protium to be developed. It may not be easy to see, but it is a standard **CSDA** model for Quantum Mechanical Thermodynamic space time for integer/Z#1.

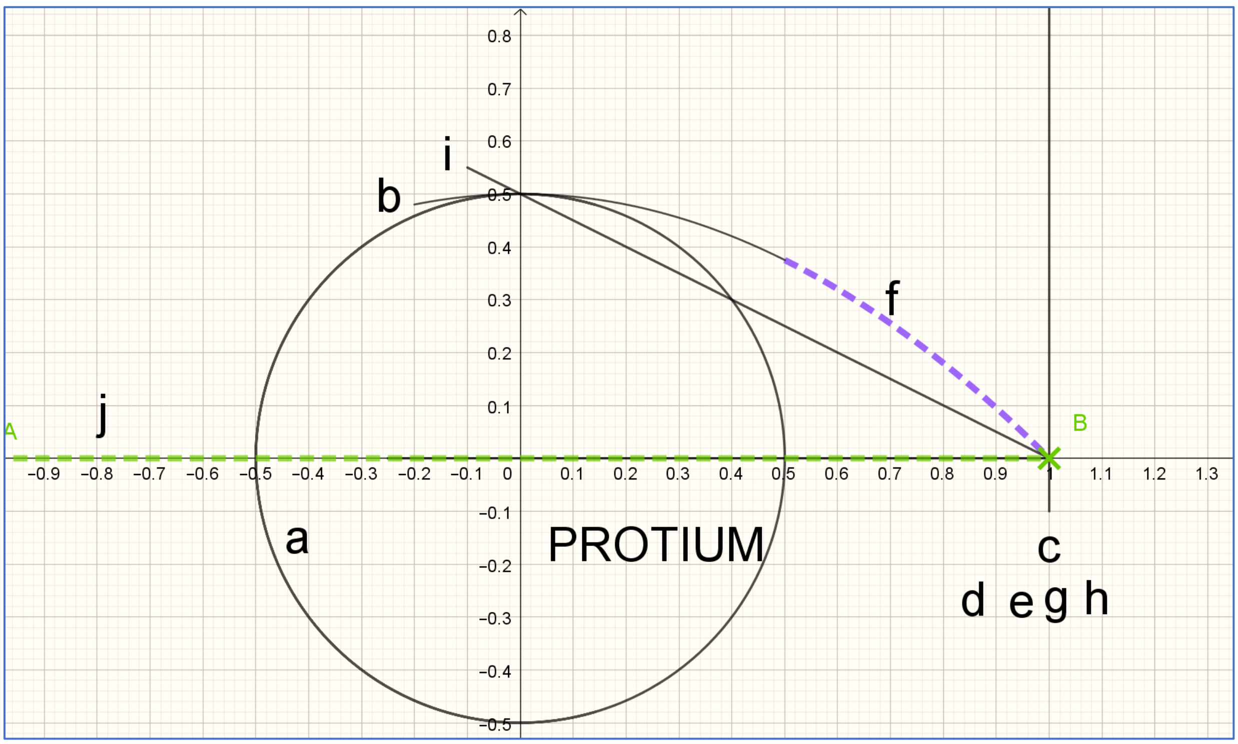
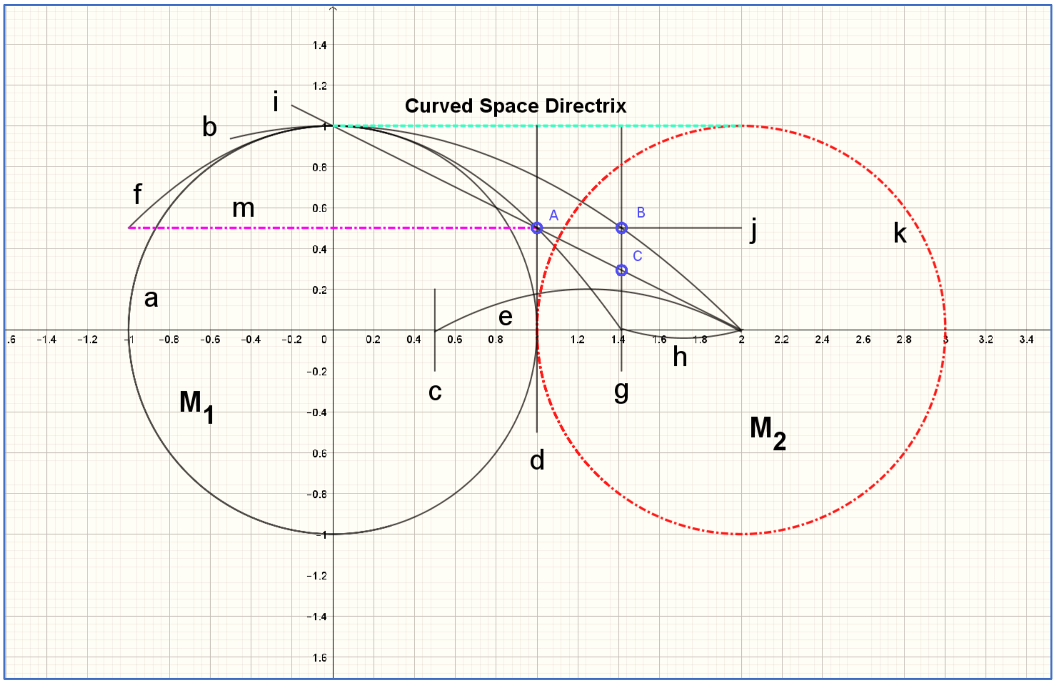


Figure 3: Basic nuclear CSDA for Protium, Z#1. points (d, e, g, h) are idle. (J), $(\sqrt[0]{n})$ has become part of the system Domain.(f),$(\sqrt[2]{n})$,has become part of the dependent curve (b).

INTEGER(2) square space, RADICAND(2) curved space. (rt2 inv roots M1)



dealing with ME integer(2)

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Name	Value	Caption
Curve a	(cos(t), sin(t))	independent/discovery curve.
Curve b	(t, t^2 / -4 + 1)	dependent/definition curve.
Curve c	(0.5, t)	curvature value.
Curve d	(1, t)	domain (1, t)
Curve e	$(9 \leftrightarrow \left(2 \leftrightarrow \frac{1}{2}\right)$	inverse square connector
Curve f	(t, t^2 / -2 + 1)	solution curve $(\sqrt[2]{n})$.

Readings from the SB

Curve g	(1.41, t)	abscissa ID ($\sqrt[2]{n}$).
Point A	A = $\left(1, \sqrt[0]{2}\right)$	
Point B	B = $(\sqrt[2]{2}, \sqrt[0]{2})$	
Point C	C = $\left(\sqrt[2]{2}, \left(1 - \frac{1}{\sqrt{2}}\right)\right)$	
Curve h	$\left(\sqrt[2]{n} \leftrightarrow n^2\right)$	curved space ME connection
Curve j	(t, t^0 / -2 + 1)	solution curve ($\sqrt[0]{n}$).
Curve m	(t, 0.5)	latus rectum for solution curve $\left(\sqrt[2]{n}\right)$.
Curve i	(t, t^1 / -2 + 1)	Solution curve: $\left(\sqrt[1]{n}\right)$.
Curve k	(cos(t) + 2, sin(t))	Shape (M_2) motive energy of orbit

Created with GeoGebra

A: (1,1/2) B: $\sqrt{2}, \frac{1}{2}$ C: $\left(\sqrt{2}, (t\char`^1/-2 + n/2\,/.\,t \to \sqrt{n})\right)$

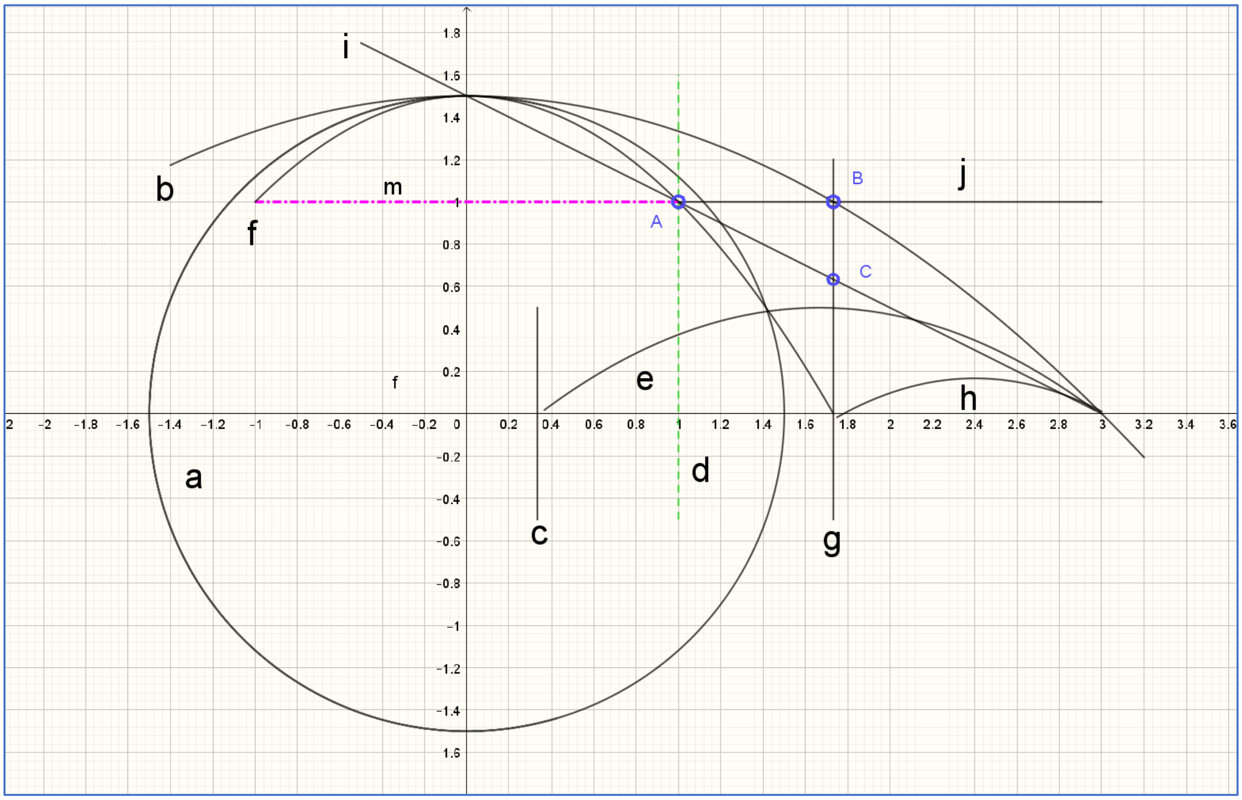
Rt.Δ (ABC): base $\left(\sqrt{2} - 1\right)$ alt.: $\frac{1}{2} - (1 - \frac{1}{\sqrt{2}})$

Hyp. $\{c \to \frac{1}{2}\sqrt{5(3 - 2\sqrt{2})}\}$

Area. $\frac{3}{4} - \frac{1}{\sqrt{2}}$

Readings from the SB

INTEGER(3) squarespace, RADICAND(3)curved space



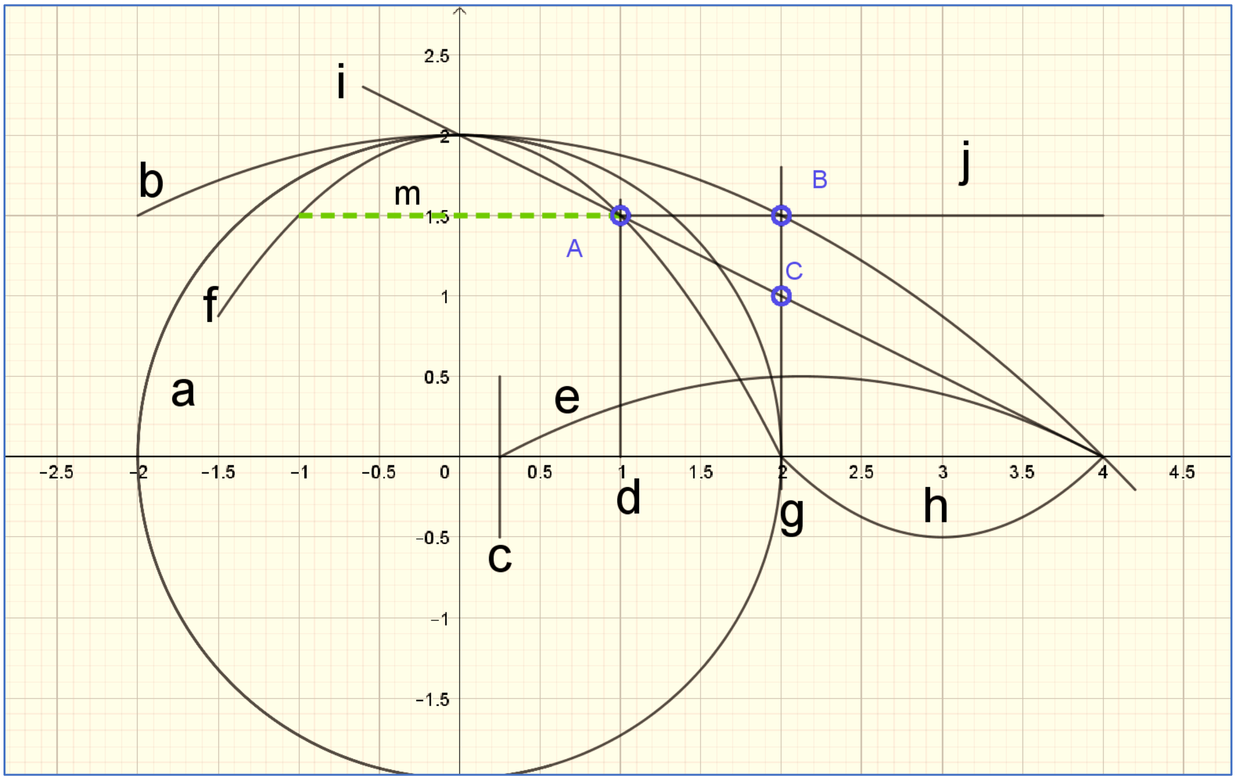
(A): (1, 1) (B): $(\sqrt[2]{3}, 1)$. (C): $((\sqrt{3},\ \frac{3}{2}-\frac{\sqrt{3}}{2})$

Rt.Δ (ABC): base $(\sqrt{3}-1)$ alt.: $\left(-\frac{1}{2}+\frac{\sqrt{3}}{2}\right)$

Hyp. $\{c \to \sqrt{\frac{5}{2}(2-\sqrt{3})}\}$

Area. $1-\frac{\sqrt{3}}{2}$

INTEGER(4) squarespace, RADICAND(4)curved space



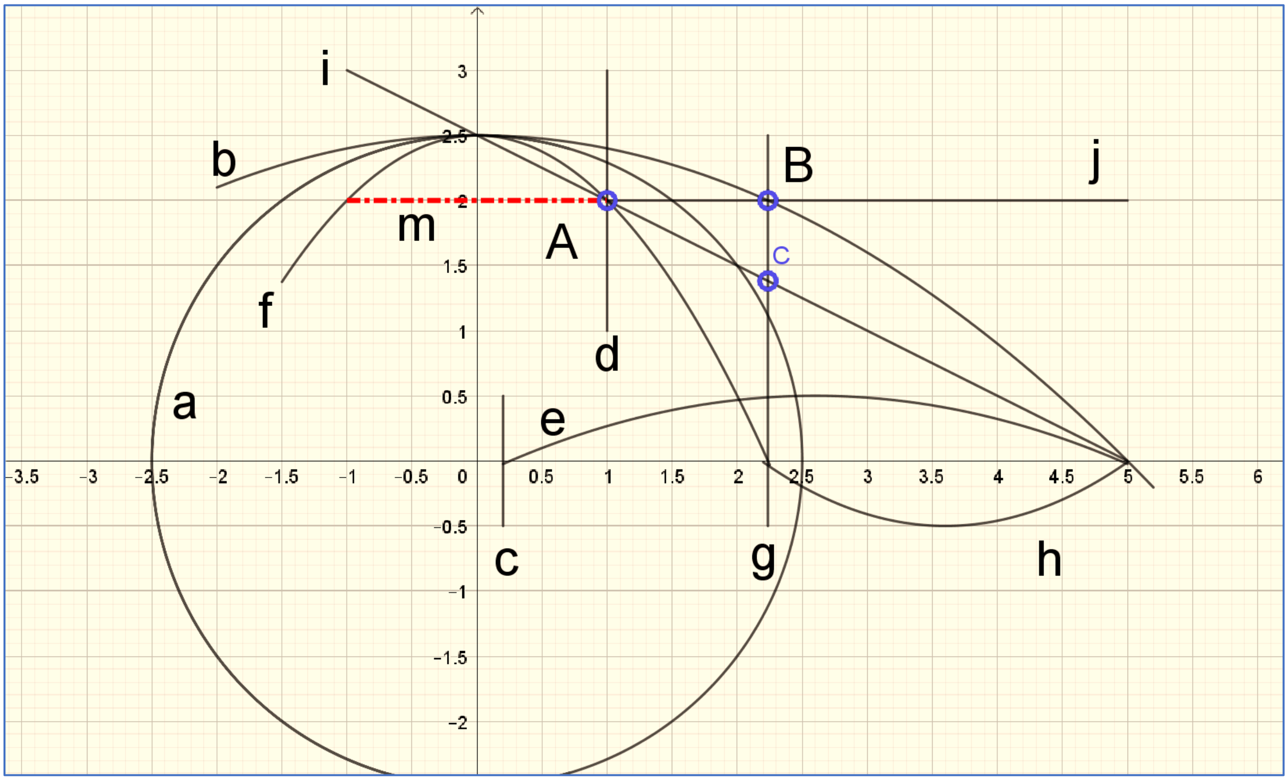
(A): $\left(1,\frac{3}{2}\right)$. (B): $\left(2,\frac{3}{2}\right)$. (C): $\left(\sqrt{4},1\right)$.

Base: $\sqrt{4}-1$ altitude: $\left(\frac{1}{2}\right)$

Hyp: $\{c \to \frac{\sqrt{5}}{2}\}$

Area. $\frac{1}{4}$

INTEGER(5) square space, RADICAND(5) curved space.



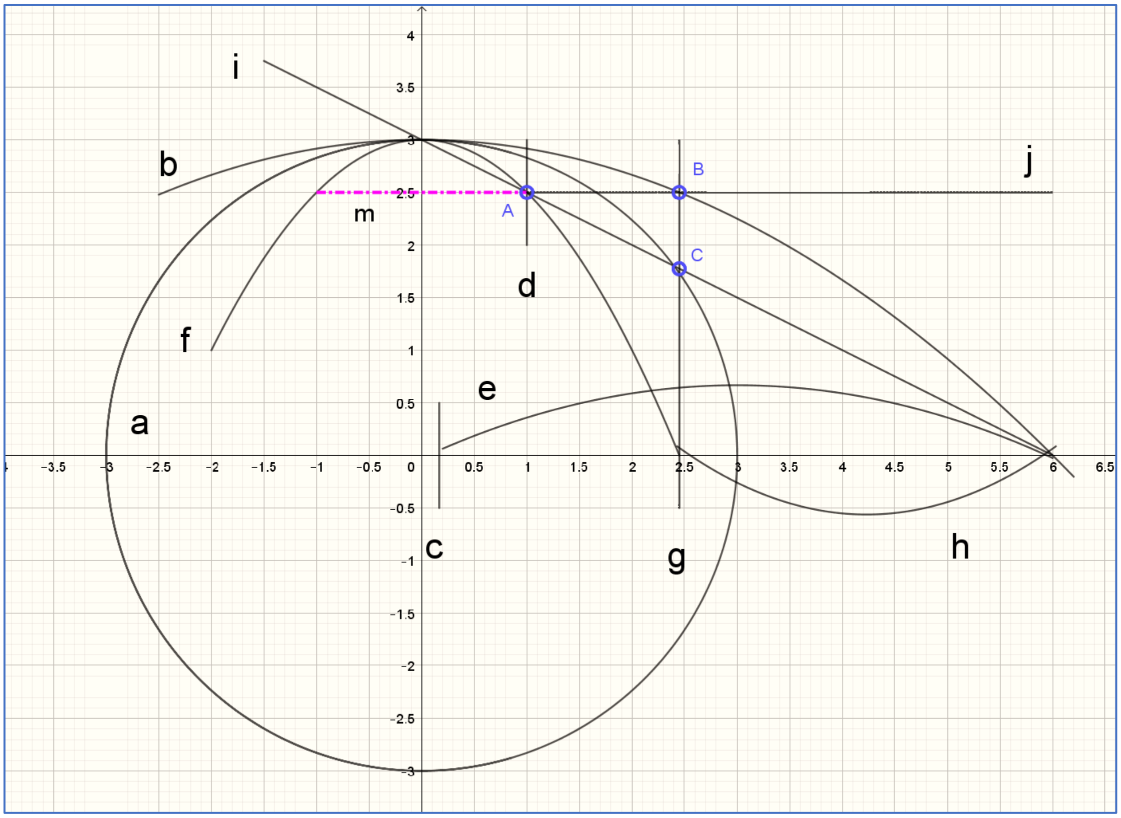
(A): (1,2). (B): $\left(\sqrt{5}, 2\right)$. (C): $\left(\sqrt{5}, \left(\frac{5}{2} - \frac{\sqrt{5}}{2}\right)\right)$.

Rt.Δ (ABC): base $\left(\sqrt{5} - 1\right)$ alt.: $\left(\frac{1}{2}\left(-1 + \sqrt{5}\right)\right)$

Hyp: $c \to \sqrt{\frac{5}{2}\left(3 - \sqrt{5}\right)}$

Area: $\frac{1}{2}\left(3 - \sqrt{5}\right)$

INTEGER(6) square space; RADICAND(6) curved space.



(A): $\left(1,\frac{5}{2}\right)$.　　(B): $\left(\sqrt[2]{6},\frac{5}{2}\right)$.　　(C): $\left(\sqrt[2]{6},\left(3-\sqrt{\frac{3}{2}}\right)\right)$

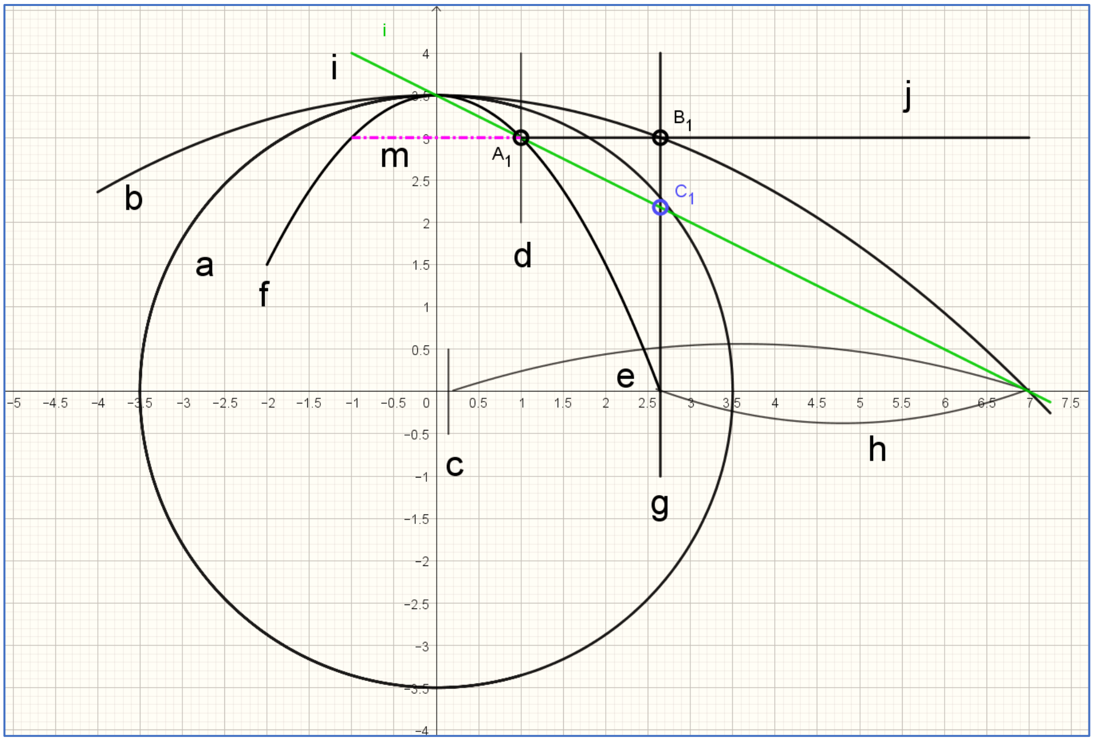
Rt.Δ (ABC): base $\left(\sqrt{6}-1\right)$　　alt.: $\frac{1}{2}(-1+\sqrt{6})$

Hyp: $\{c \to \frac{1}{2}\sqrt{5(7-2\sqrt{6})}\}$

Area: $\frac{1}{4}(7-2\sqrt{6})$

Readings from the SB

INTEGER(7) square space; RADICAND(7) curved space.



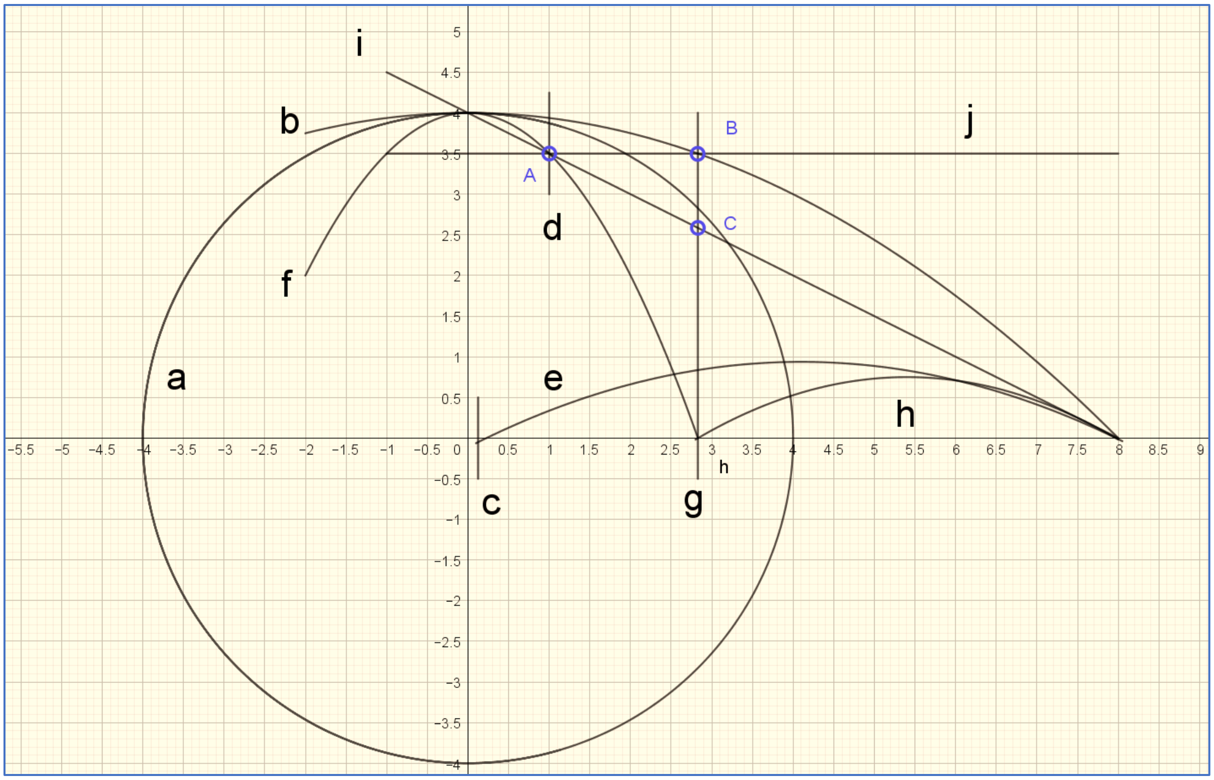
(A): $(1,3)$. (B): $(\sqrt[2]{7}, \sqrt[0]{7})$. (C): $\left(\sqrt[2]{7}, \left(\frac{7}{2} - \frac{\sqrt{7}}{2}\right)\right)$

Rt.Δ (ABC): base $\left(\sqrt{7} - 1\right)$ alt.: $\left(\frac{1}{2}(-1 + \sqrt{7})\right)$

Hyp: $c \to \sqrt{10 - \frac{5\sqrt{7}}{2}}$

Area: $2 - \frac{\sqrt{7}}{2}$

INTEGER(8) square space; RADICAND(8) curved space.



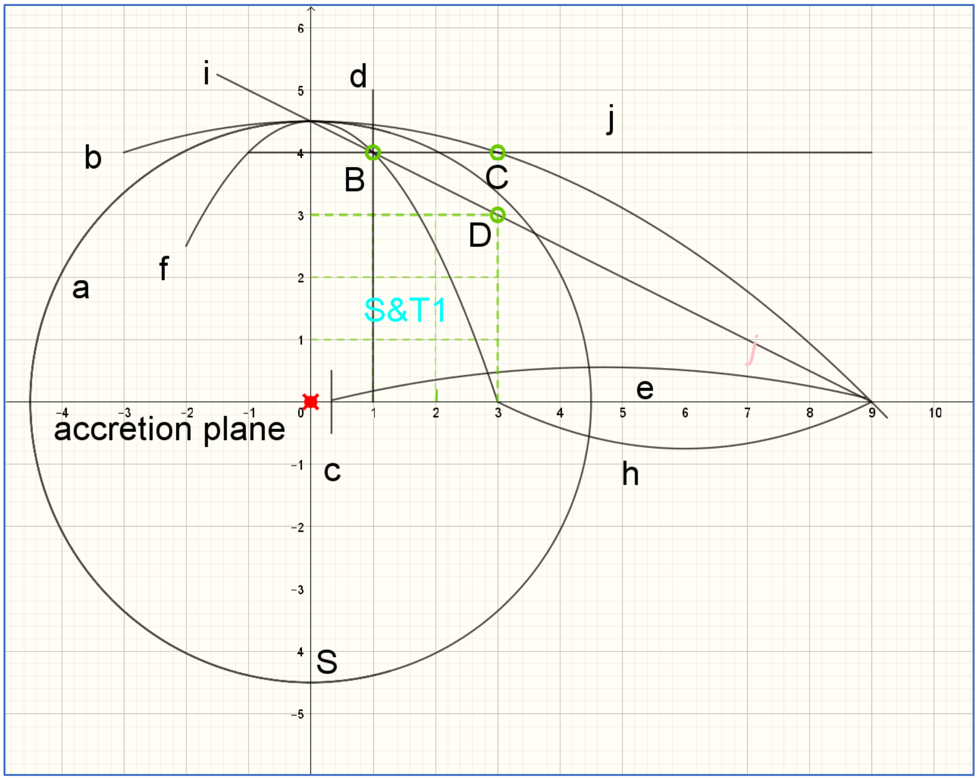
(A): $(1,3.5)$. (B): $(\sqrt[2]{8}, \sqrt[0]{8})$. (C): $\left(\sqrt[2]{8}, \left(4-\sqrt{2}\right)\right)$

Rt.Δ (ABC): base $\left(\sqrt{8}-1\right)$ alt.: $-\frac{1}{2}+\sqrt{2}$

Hyp: $\{c \to \frac{1}{2}\sqrt{5(9-4\sqrt{2})}\}$

Area: $\frac{9}{4}-\sqrt{2}$

INTEGER(9) square space; RADICAND(9) curved space.



(A): $(1,4)$. (B): $\left(\sqrt[2]{9}, \sqrt[0]{9}\right)$. (C): $\left(\sqrt[2]{9}, 3\right)$

Rt.Δ (ABC): base $\left(\sqrt{9}-1\right)$ alt.: $\left(4-(3)\right)$

Hyp: $\{c \to \sqrt{5}\}$

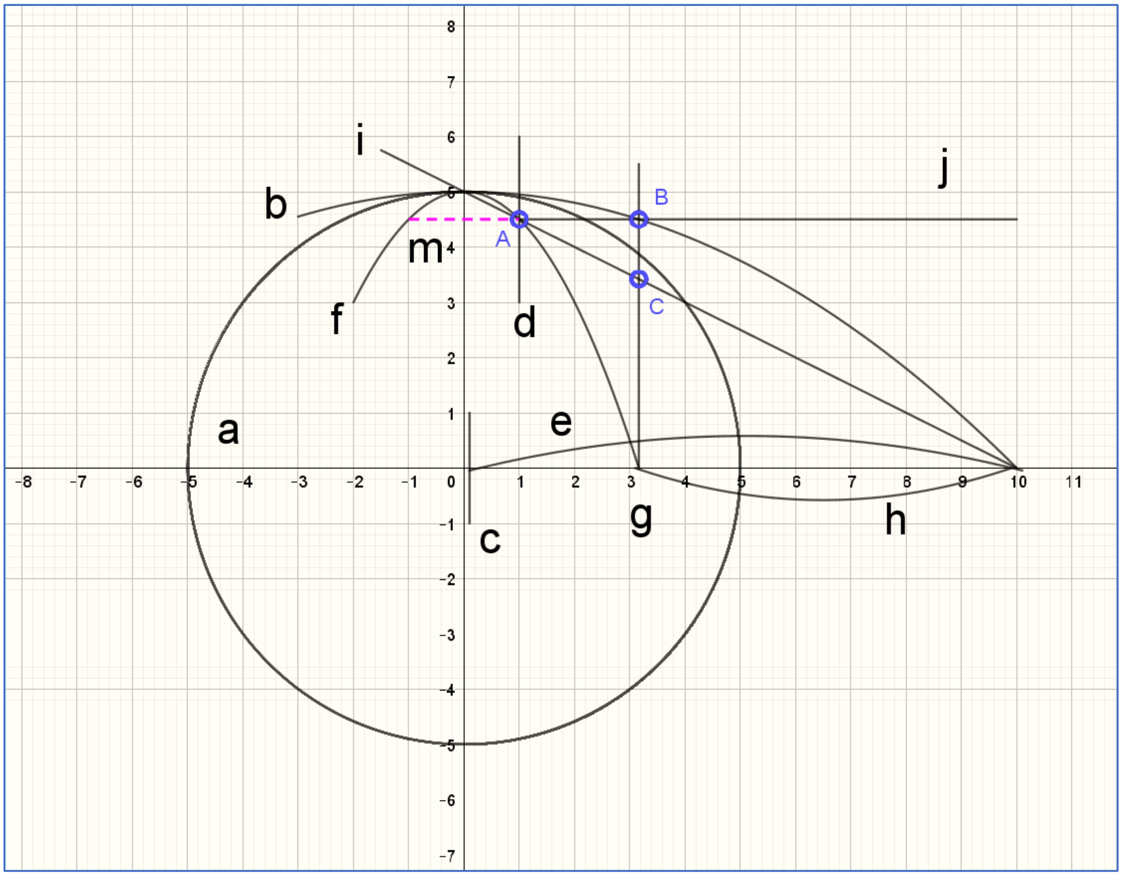
Area: 1

The Beatles nailed it. Number(9), number(9), number(9)…

I say integer 9 is our registration with curved space ME. This number is source for both Euclid's 1st spacetime frame and rules of Nature found by Galileo's incline plane researching S&T1 providing domain and range of Euclid's space time tiles $(16ft, 1s)$.

Its here and only here that the +latus rectum on $\left(\sqrt[2]{9}\right)$ links these curves, $\left(\sqrt[0]{9}\right)$, $\left(\sqrt[1]{9}\right)$, and $\left(\sqrt[2]{9}\right)$ with counting integer(9) of our square space domain. It's the only **CSDA** ME construction to link $\left(\sqrt[1]{9}\right)$ and integer(9) with (3)seconds of Galileo's S&T1 providing (9) perfect tiles connecting our Earth with God's Creation.

INTEGER(10) square space; RADICAND(10) curved space.



(A): $\left(1, \sqrt[0]{10}\right)$.   (B): $\left(\sqrt[2]{10}, \sqrt[0]{10}\right)$.   (C): $\left(\sqrt[2]{10}, \left(5 - \sqrt{\frac{5}{2}}\right)\right)$

Rt.Δ (ABC): base $\left(\sqrt{10} - 1\right)$ alt.: $-\frac{1}{2} + \sqrt{\frac{5}{2}}$

Hyp: $\{c \to \frac{1}{2}\sqrt{55 - 10\sqrt{10}}\}$

Area: $\frac{1}{4}(-1 + \sqrt{10})^2$

Methods to determine coordinates of infinities Cross Over Triangle.

I use templates from Wolfram:

- $\sqrt[0]{n}$: $t\verb|^|0/-2+n/2\,/.\,t \to \sqrt{n}$
- $ordinat\ of\ point\ (C)$: $t\verb|^|1/-2+n/2\,/.\,t \to \sqrt{n}$

Coordinates of Crossover; (A), (B), (C)

A: $(1, t^0)$ B: $\left(\left(\sqrt[2]{n}\right), t^0\right)$ (C): $\left(\sqrt[2]{n}\right), \left(t\verb|^|1/-2+n/2\,/.\,t \to \sqrt{n}\right)$

crossover (ABC) : base: $\left(\sqrt[2]{n}\right) - 1$ alt.: $\left(\left(t^0\right) - \left(t\verb|^|1/-2+n/2\,/.\,t \to \sqrt{n}\right)\right)$.

hypotenuse: $\mathrm{Solve}[(\sqrt{n}-1)^2 + (t\verb|^|1/-2+n/2\,/.\,t \to \sqrt{n})^2 == c^2, c]$

area: $\left(\frac{base}{2} * altitude\right)$

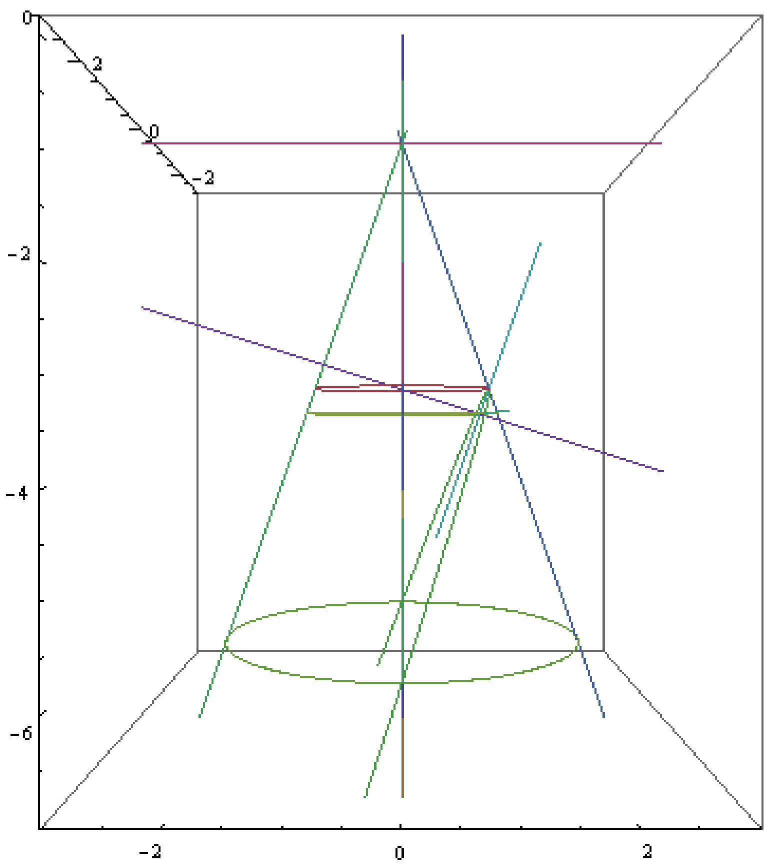
Readings from the SB

n	Base	Altitude	Hyp	area
2	$(\sqrt{2}-1)$	$\frac{1}{2}-(1-\frac{1}{\sqrt{2}})$	$\{c \to \frac{1}{2}\sqrt{5(3-2\sqrt{2})}\}$	$\frac{3}{4}-\frac{1}{\sqrt{2}}$
3	$(\sqrt{3}-1)$	$\left(-\frac{1}{2}+\frac{\sqrt{3}}{2}\right)$	$\{c \to \sqrt{\frac{5}{2}(2-\sqrt{3})}\}$	$1-\frac{\sqrt{3}}{2}$
4	$(\sqrt{4}-1)$	$\left(\frac{1}{2}\right)$	$\{c \to \frac{\sqrt{5}}{2}\}$	$\frac{1}{4}$
5	$(\sqrt{5}-1)$	$\left(\frac{1}{2}(-1+\sqrt{5})\right)$	$c \to \sqrt{\frac{5}{2}(3-\sqrt{5})}$	$\frac{1}{2}(3-\sqrt{5})$
6	$(\sqrt{6}-1)$	$\left(\frac{1}{2}(-1+\sqrt{6})\right)$	$\{c \to \frac{1}{2}\sqrt{5(7-2\sqrt{6})}\}$	$\frac{1}{4}(7-2\sqrt{6})$
7	$(\sqrt{7}-1)$	$\left(\frac{1}{2}(-1+\sqrt{7})\right)$	$c \to \sqrt{10-\frac{5\sqrt{7}}{2}}$	$2-\frac{\sqrt{7}}{2}$
8	$(\sqrt{8}-1)$	$\left(-\frac{1}{2}+\sqrt{2}\right)$	$\{c \to \frac{1}{2}\sqrt{5(9-4\sqrt{2})}\}$	$\frac{9}{4}-\sqrt{2}$
9	$(\sqrt{9}-1)$	$(4-(3))$	$\{c \to \sqrt{5}\}$	1
10	$(\sqrt{10}-1)$	$\left(-\frac{1}{2}+\sqrt{\frac{5}{2}}\right)$	$\{c \to \frac{1}{2}\sqrt{55-10\sqrt{10}}\}$	$\frac{1}{4}(-1+\sqrt{10})^2$

Readings from the SB

Coordinates of cross over for first 10 integers.

Radicand integer	Coordinate (A)	Coordinate (B)	Coordinate (C)
(1) protium	N/A	N/A	N/A
(2)	(1,1/2)	$\sqrt{2}, \frac{1}{2}$	$\left(\sqrt[2]{2}, \left(1 - \frac{1}{\sqrt{2}}\right)\right)$
(3)	(1, 1)	$(\sqrt[2]{3}, 1)$.	$\left(\sqrt{3}, \quad \frac{3}{2} - \frac{\sqrt{3}}{2}\right)$
(4)	$\left(1, \frac{3}{2}\right)$.	$\left(2, \frac{3}{2}\right)$.	$(\sqrt{4}, 1)$.
(5)	(1,2).	$(\sqrt{5}, 2)$	$\left(\sqrt{5}, \quad \left(\frac{5}{2} - \frac{\sqrt{5}}{2}\right)\right)$
(6)	$\left(1, \frac{5}{2}\right)$.	$\left(\sqrt[2]{6}, \frac{5}{2}\right)$	$\left(\sqrt[2]{6}, \left(3 - \sqrt{\frac{3}{2}}\right)\right)$
(7)	$(1,3)$.	$(\sqrt[2]{7}, \sqrt[0]{7})$.	$\left(\sqrt[2]{7}, \left(\frac{7}{2} - \frac{\sqrt{7}}{2}\right)\right)$
(8)	$(1,3.5)$	$(\sqrt[2]{8}, \sqrt[0]{8})$	$(\sqrt[2]{8}, (4 - \sqrt{2}))$
(9)	$(1, 4)$.	$(\sqrt[2]{9}, \sqrt[0]{9})$	$(\sqrt[2]{9}, 3)$
(10)	$(1, \sqrt[0]{10})$	$(\sqrt[2]{10}, \sqrt[0]{10})$	$\left(\sqrt[2]{10}, \left(5 - \sqrt{\frac{5}{2}}\right)\right)$



Using computer parametric geometry code to construct the focus of an Apollonian parabola section within a right cone.

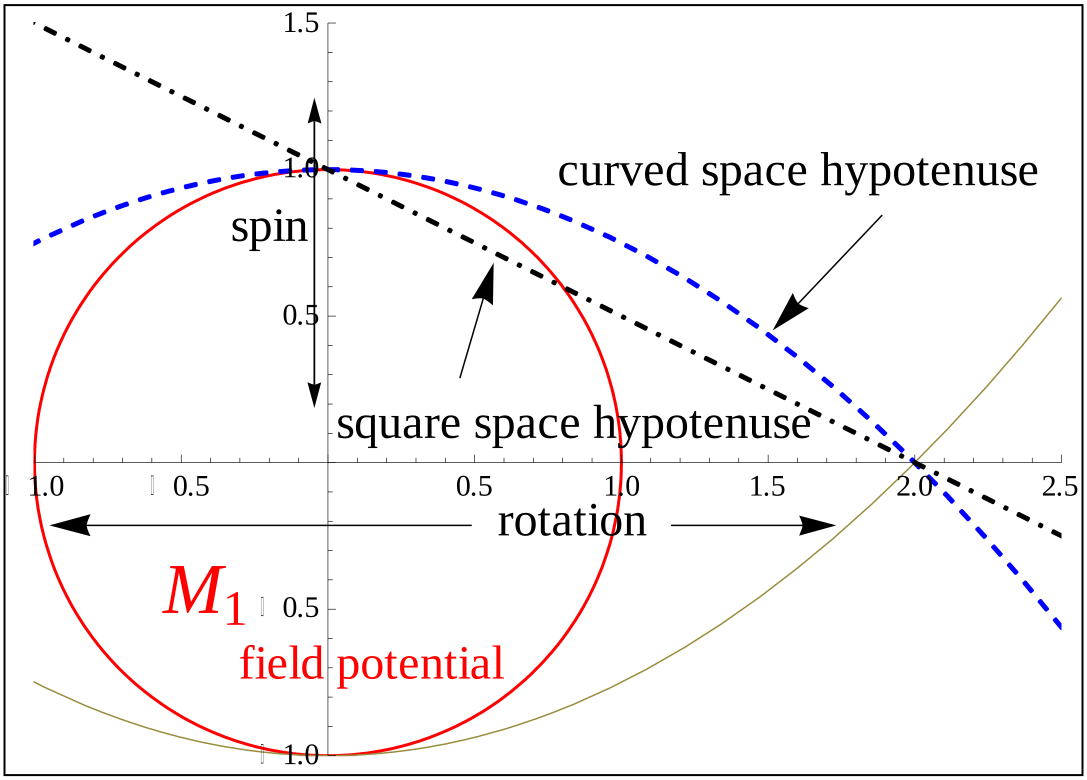
"It is remarkable that the directrix does not appear at all in Apollonius great treatise on conics. The focal properties of the central conics are given by Apollonius, but the foci are obtained in a different way, without any reference to the directrix; the focus of the parabola does not appear at all... Sir Thomas Heath: "A HISTORY OF GREEK MATHEMATICS" page 119, book II.

The computer is my sandbox, the unit circle my compass, and the focal radius of the unit parabola my straight edge. Armed with these as weapon and shield, I go hunting Curved Space Parametric Geometry.

ALΣXANDΣR; CEO SAND BOX GEOMETRY LLC

CAGE FREE THINKIN' FROM THE SAND BOX

The square space hypotenuse of Pythagoras is the secant connecting (π/2) spin radius (0, 1) with accretion point (2, 0). I will use the curved space hypotenuse, also connecting spin radius (π/2) with accretion point (2, 0), to analyze G-field mechanical energy curves.



CSDA demonstration of a curved space hypotenuse and a square space hypotenuse together.

We have two curved space hypotenuses because the gravity field is a symmetrical central force and will have an energy curve at the **N** pole and one at the **S** pole of spin: just as a bar magnet. When exploring changing acceleration energy curves of M_2 orbits, we will use the N curve as our planet group approaches high energy perihelion on the north time/energy curve.

ALΣXANDΣR; CEO SAND BOX GEOMETRY LLC

The foundation of human mathematics is geometry. If one would take some time to look at the written works (they happen to be library available) of Newton, Kepler, and the time-tested Conic Treatise of Apollonius, you will be face-to-face with the stick art of human mathematics. However, unlike art, freedom of interpretation is not invited. Only a single path of rigorous logic leading to an irrefutable conclusion is proffered. Proofing still rules today, as the only way to structure an argument advancing human math to the next level.

For me, it is not important to understand the proofing used with exploratory Philosophical Geometry of the Masters for this can be as difficult to fathom as a triple integral proof, simply witness the incisive descriptive language, explaining methods used by these great geometers of our past, Huygens, Newton, and Kepler, to name a few, as they ponder Questions of Natural Phenomena of Being using descriptive mathematical relations between lines and curves with the unique irrefutable perspective of picture perfect Classic Geometry. Geometry after-all, is one tongue spoken, written, and understood by all humans.

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