Functions of Squaring Pi Of ferman: Fernando Mancebo Rodriguez 2009

Introduction

The squaring Pi as power number Pi^n

The squaring Pi is a Pi number that is obtained by direct functions of the diverse parameters that compose the circumference, as can be diameter, circumscribe and inscribed squares, etc. For this author this should to be the correct Pi number due to its properties, qualities, simplicity and natural method of attainment (to be direct functions of the parameter of the circumference). The qualities of this number as direct function of its component parameters; to be a power number, etc., gives this number a high quality that it couldn't have in the case of not being the correct Pi number.

At the same time, the algorithmic Pi possibly is not the correct one due to it not complete these properties and qualities.

That way, we go to revise below some direct formulas for obtaining the squaring Pi, and also some postulations contrary to the algorithmic Pi.

Pi number in function of the diameter of circumference.



 $\pi = (2^{3} \times ((2^{3}+2)^{(2^{4})}))^{(1/(2^{5}+2))} = 3,1415914441419926521824884125531...$

Figure 1

Pi number in function of the circumscribed square to the circumference.



Figure 2

Pi number in function of the inscribed square to the circumference.



Formula by the inscribed square to the circumference

Figure 3

Pi number as interrelation with the decimal system and circumscribed square



Interrelación matemática entre el Sistema decimal - Cuadrado circunscrito - Pi

Figure 4

Geometric Interrelation Pi number – Circumscribed square.





Contrary postulation to the algorithmic Pi

Curved lines have small dimension than the same ones in rectilinear form.

Series formulas (arctangent, polygons, etc.) ferman



Arctgn(1) = $1 - \frac{1}{3} + \frac{1}{5} - \frac{1}{7} + \frac{1}{9} - \dots 0.7853981633 \dots$

The arctangent formula, the same than the summation of inscribed polygon sides and other series give us measurements in straight line, not a curve line. Measurement in curve line are shorter than in straight line when all the portions of the curve line are nearer among them by the interior of the curve.

Polygons sides summation

Figure 6

Lines measure less in curve lines than in straight lines

Dimensional difference between curves and straight lines



If in curve lines the points (portions) are nearer among them than in straight lines, then the dimension in curve lines must to be shorter. Then, an adjustment of any curve in straight way must to gives us a larger dimension.

Figure 7

Vertices of inscribed sides are summed two times



The current Pi number is incorrect due to in its algorithmic attainment we sum two times each point of the circumference \bigcirc when belonging to two poligon sides 2 $\bigcirc_{s_2}^{s_1}$ at the same time

El número Pi actual es erróneo pues para su obtención sumamos cada punto de la circunferencia dos veces, por pertenecer cada punto a dos lados del poligono inscrito llegando a sobrepasar la suma algoritmica de lados a la longitud de la circumferencia real





Conclusions: Ferman's view-points



Figure 9

The squaring Pi property of being a power number (Piⁿ)

Power functions of Squaring Pi describe us arithmetically all the squares and circumferences inscribed and circumscribed among them geometrically. The algorithmic Pi doesn't make.



All these circumcribed squares and circumferences are power functions of squaring Pi, and vice versa, but not of the algorithmic Pi.

Fourth dimension of space

son función potencial de Pi cuadrante, y viceversa, pero no del Pi algoritmico

Different operations (as multiplication, division, powers) among these squares and circumferences follow given us large or small circumscribed and inscribed squares and circumferences, which also are in turn power functions of squaring Pi. Por tanto, el Pi cuadrante tiene las propiedades geometrico-matematicas que This way, the squaring Pi has the properties that the correct Pi should have, while the algorithmic Pi doesn't have. el Pi correcto debería tener, mientras que el Pi algoritmico no las tiene.

Figure 10

Coefficient of interrelation (I-coeff.) among the circumference and its inscribed squares.



"In this sense, the squaring Pi enlarges and gets properties that the correct Pi should have, while the algorithmic Pi doesn't have"

References:

--- Ramanujan, Srinivasa, "Modular Equations and Approximations to π ", *Quarterly Journal of Pure and Applied Mathematics*, **XLV**, 1914,

--- Niven, Ivan, "A Simple Proof that pi Is Irrational", *Bulletin of the American Mathematical Society*, **53**:7 (July 1947),

--- Schepler, H. C. (1950). "The Chronology of Pi". *Mathematics Magazine* (Mathematical Association of America) **23** (3): 165–170

--- Shanks, Daniel and Wrench, John William, "Calculation of pi to 100,000 Decimals", *Mathematics of Computation* **16**(1962)

--- Wagon, Stan, "Is Pi Normal?", The Mathematical Intelligencer, 7:3(1985)

--- Borwein, Jonathan, Borwein, Peter, and Bailey, David H., *Ramanujan, Modular Equations, and Approximations to Pi or How to Compute One Billion Digits of Pi*", The American Mathematical Monthly, **96**(1989) 201–219

--- Delahaye, Jean-Paul, "Le Fascinant Nombre Pi", Paris: Bibliothèque Pour la Science (1997)

--- Eymard, Pierre; Lafon, Jean Pierre (1999). *The Number Pi*. American Mathematical Society.