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P vs. Np Clay Institute Millenum Problem Solution

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Abstract: *Here is the solution to the P-NP problem. It provides the solution to the limits of parabolic time which is determined by the Golden Mean Parabola. The limits are the Golden Mean and the Conjugate. The area of the P=NP solution is Pi/4.*

1. Introduction

P versus NP is the following question of interest to people working with computers and in mathematics: Can every solved problem whose answer can be checked quickly by a computer also be quickly solved by a computer? P and NP are the two types of maths problems referred to: P problems are fast for computers to solve, and so are considered "easy". NP problems are fast (and so "easy") for a computer to check, but are not necessarily easy to solve.

WIKIPEDIA

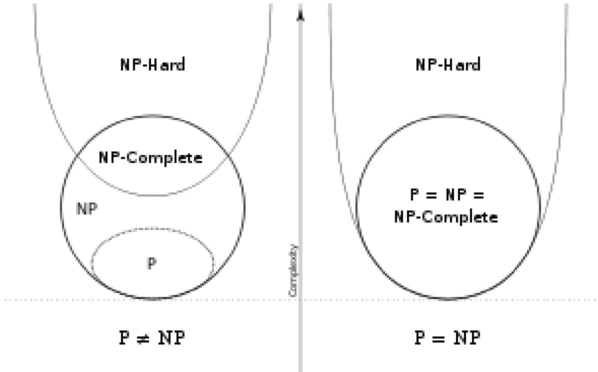


ILLUSTRATION 1 WIKIPEDIA

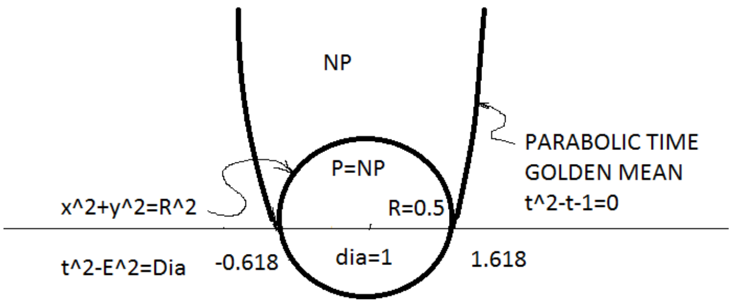


ILLUSTRATION 2 PARABOLIC TIME MEETSP=NP

2. The Equations

PARABOLIC TIME: The Golden Mean Equation

t^2-t-1=0

P=NP : The Circle

X^2-y^2=R^2

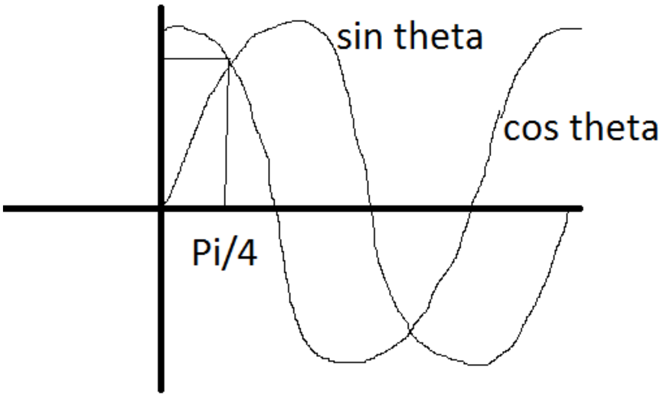


ILLUSTRATION 3 SIN=COS

Sin t=cos t

Sint/cos t=1=1

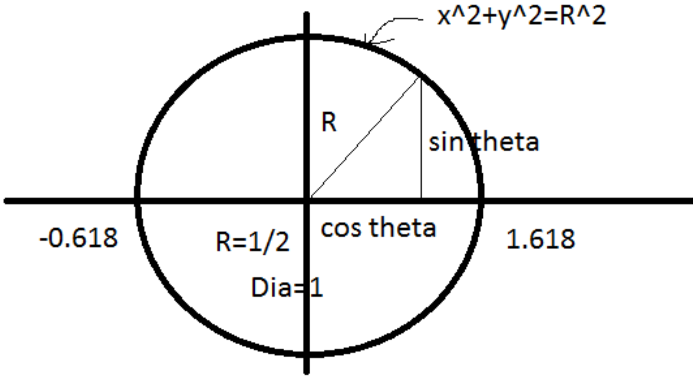
Tan t=1

T=45 degrees =0.7854 rads

E=1/t

=1/0.7854=0.1273=rho = density

E=rho=y (Universal Density)



ILLLUSTRATION 4 THE GOLDEN MEAN CIRCLE

X^2+y^2=R^2

R=1/2

X^2+y^2=(1/2)^2

Y=E=0.1273 = rho

X^2+(0.1273)^2=1/4

X=0.2338

Ln x=Pi

Plug into the Golden Mean Equation:

(0.2338^2-0.2338-1=0.1179~118 (# of Chemical elements)

E=26.667/1.602*117.9=0.858

=sin 57.29 degrees=sin 1 rad=cos 1 rad

(Universal Mohr-coulomb Failure)

t=1 rad

R=1/2

dia=1=t

sin^2(0)+cos ^2(0=R^2

0+1=R^2

R=1

But R=1/2

R=2R

X^2-x—1=1

X^2-x-1=2R

Golden Mean = dia

1.618-(-0.618)=1

X^2-x-1=2R

Sin ^2(theta+cos^2 theta=R^2

Derivative

2cos theta+2 sin theta=2R

Sin – cos=2R

Sin theta-cos theta=2(1/2)

Sin theta-cos theta=1

Cos = 1-sin

Momentum=Moment

Mv=Fd

26.667(0.8515)=2.667(d)

D=s=0.8415

V=s

Ds/dt=s

Y=y’

Y=e^x

Now t=1 E=y=e^t

E=1/t=1/1=e^t

t=0

So from the Golden Mean parabola

T^2-t-1=0

(0)^2-0-1=1

And the circle:

X^2-y^2=R^2

(0)^2-(e^0)-1=0

R=0 (Trival)

So P=NP at t=0 in parabolic time. The roots are 0.618, 1.618 which are the limits of time. So, if -0.618<t<1.618, P=NP and the value is determined by t^2-t-1

Area of P-NP circle of radius=1/2

A=PiR^2=Pi(1/2)^2=Pi/4=45 degrees (see above)

A bit more on how to look at this problem, is:

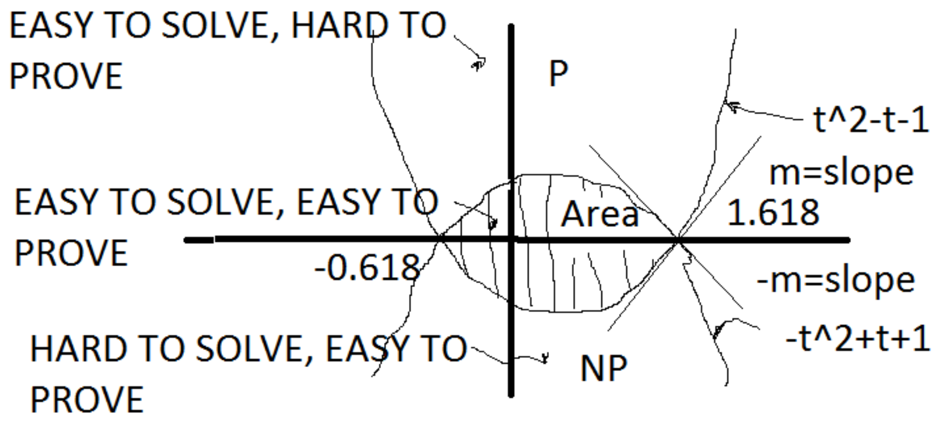


Illustration Golden Mean Parabolas

The slope of P vs NP meet at the derivatives.

2t-1=-2t+1

4t-2=0

T=1/2t^2-t-1=0

Integrate

T^3/3-t^2/2-t=E

T=1/2 , E=G=2/3

This is the Clairnaut Differential Equation.

D^2/dt^2-E=0

D^2/dt^2=G

Common Areea t=(-1/2, +1/2)

T=1

1^3/3-1^2/2-1=0.1666=1/6

1/6-(-1/6)=2/6=1/3

Circumference of the circle

C=2Pir

1/3=2Pi R^2

R=23.03

Area=Circ

Y=y'

Ln t=t

Ln 23.03=3.13~Pi

Equation of a circle

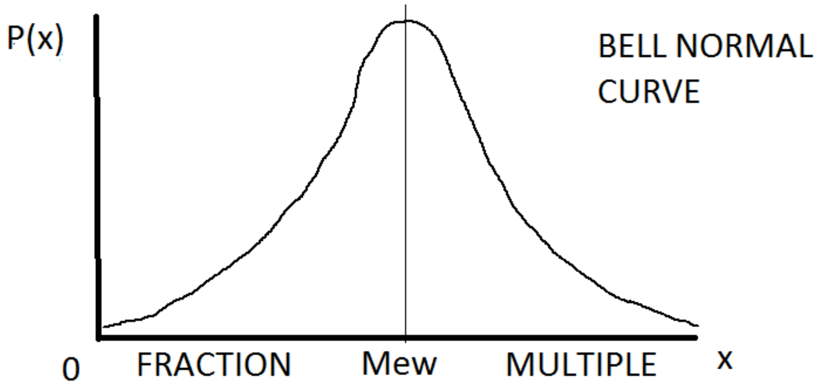
X^2-y^2=R^2

2x^2=Pi^2

X=Pi/ sqrt 2=0.,222

=127=rho=density

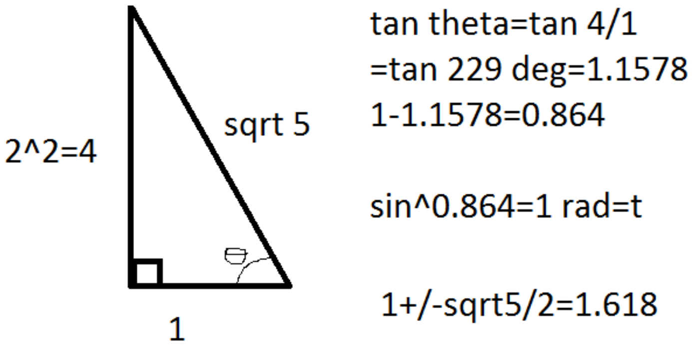
Now for the Easy to Solve; Hard to Check:



Mew=1

Mew =1/-0.618=-1.618

This is the golden Mean Equation roots



3. Conclusion

P=NP has a solution. It lies on the Golden Mean function between t= -0.618, and 1.618. Otherwise, there is no solution.

References

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