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A METHOD TO IDENTIFY THE REAL π (548th Proof on Rho)

We have the following values to π Constant:

1. $\frac{22}{7} = 3.142857$ of Archimedes
2. 3.14159265358 of the whole world
3. 3.14460551 derived from Golden Ratio
4. 3.146146148 of Sivajayakumar
5. 3.14644660941 .... $\left(\frac{14-\sqrt{2}}{4}\right) = \text{Rho}$

The last one differs from the above in the following features:

1. Exact Value ($\sqrt{2}$ is an exact value 1.414213562373 an approximate value)
2. Algebraic number
3. Squaring a Circle - no more an unsolved problem
4. The Delian Problem - "
5. Based on Radius (r) only.

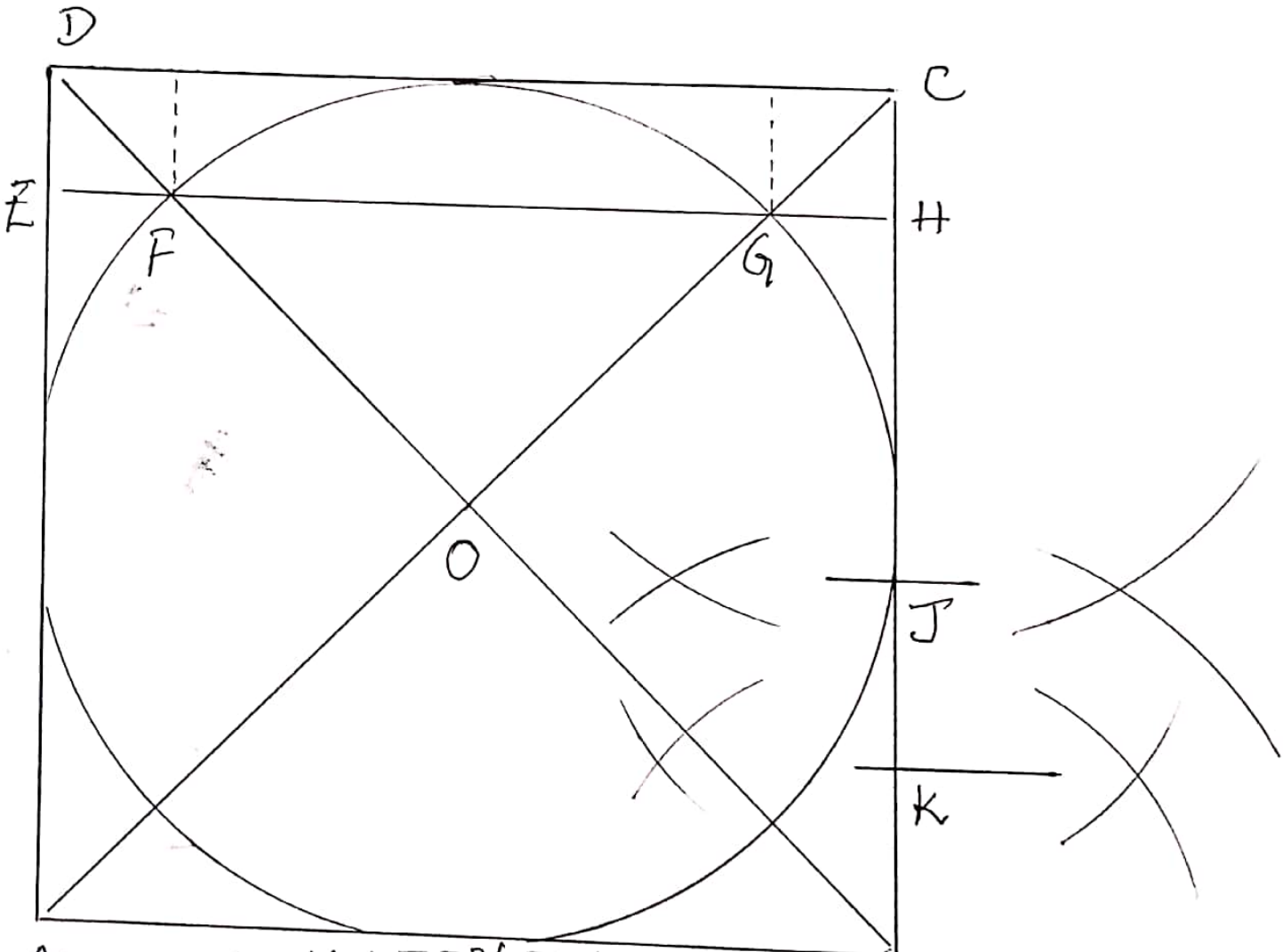
$$\text{Area of Circle} = r\left(\frac{7r}{2} - \frac{\sqrt{2}\,r}{4}\right) = \pi r^2$$

$$\text{Circumference} = 6r + \frac{2r - \sqrt{2}\,r}{2} = 2\pi r$$

Method

Let the Side = Diameter is equal to $\frac{16000}{14-\sqrt{2}} = \frac{16000}{12.585786437}$ and draw a Square and inscribe a Circle with the Square.

$\frac{16000}{12.585786437} = 1271.27534534$



$1271.27534534 = \frac{16000}{14-\sqrt{2}}$

Side of Square = Diameter of Circle = $\frac{16000}{14-\sqrt{2}}$

A length equal to $\frac{16}{16-\sqrt{2}}$ is constructible geometrically, exactly using Compass and Straight edge. And this process is very lengthy one, the reader is requested to refer the Book: "Pi of the Circle" Vol. I Book I and Book II of this author in "Research Gate - Sarvaj Nanavaddha Reddy"

"Chosen"

1. Side = Diameter = $\frac{16000}{14-\sqrt{2}}$
2. Parallel Side = EH = $\frac{16000}{14-\sqrt{2}}$
3. Radius = OF = OG = $\frac{8000}{14-\sqrt{2}}$
4. Triangle = FOG
5. Hypotenuse = Radius $\times \sqrt{2}$

$= \frac{8000}{14-\sqrt{2}} \times \sqrt{2} = \frac{8000\sqrt{2}}{14-\sqrt{2}}$

6. We have to find out = CH.

CH is equal to DE, EF = GH also, because they are all sides of small squares (corner)

7. Then $CH = \frac{\text{Parallel Side} - \text{Hypotenuse}}{2}$

$$= \left\{ \frac{16000}{14-\sqrt{2}} - \frac{8000\sqrt{2}}{14-\sqrt{2}} \right\} \frac{1}{2}$$

$$= 4000 \left\{ \frac{(2-\sqrt{2})}{14-\sqrt{2}} \right\}$$

8. What is HB ?

$$\text{Side} - CH = \frac{16000}{14-\sqrt{2}} - 4000\left(\frac{2-\sqrt{2}}{14-\sqrt{2}}\right)$$

$$= \frac{8000 + 4000\sqrt{2}}{14-\sqrt{2}} = HB$$

9. Bisect HB twice

$HB \rightarrow HJ + JB$

$JB \rightarrow JK + KB$

So, finally $KB = \frac{2000 + 1000\sqrt{2}}{14-\sqrt{2}}$

10. Now, Subtract KB from side BC and We get a length equal to CK and is equal to Quarter circumference · 1000.

11. So, $CK = 1000$

$$\text{Side } BC - KB = CK$$

$$\frac{16000}{14-\sqrt{2}} - \frac{2000+1000\sqrt{2}}{14-\sqrt{2}} = 1000$$

Verification Process

12. Let us find out Quarter Circumference of Circle of the Fig. using above π values.

13. $\frac{22}{7} = 3.142857\,2857$, circumference $= \pi d$

Diameter $= \frac{16000}{14-\sqrt{2}} = 1271.275345\,34$

$$\frac{3.142857\,2857}{4} \times 1271.275345\,34 = 998.659245\,307$$

(14). World π value 3.14159265358

$$\frac{3.14159265358}{4} \times 1271.27534534$$

$$= 998.457321397$$

(15). Golden π value $= 3.14460551$

$$\frac{3.14460551}{4} \times 1271.27534534$$

$$= 999.414886392$$

(16) 3.148148148 of Siva Jayakumar

$$\frac{3.148148148}{4} \times 1271.27534534$$

$$= 1000.540781105$$

(17) 1998 π Called Rho

$$\frac{14-\sqrt{2}}{4} \times \frac{1}{4} \times \frac{16000}{16-\sqrt{2}} = 1000$$

——— Sumary in Table

(18) $\frac{22}{7}$ — 998.859245307

(19) 3.14159265 — 998.457321397

(20). 3.14460551 — 999.27534534

(21). 3.148148148 - 1000.540781105 — and

(22). Rho $= \frac{16-\sqrt{2}}{4}$ — 1000.0

So, Rho is the Real π from this analy-sis.

Thank God

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