

## Unchallengeable Visual Proof to Ascertain the Reality of Cosmic Pi (175<sup>th</sup> Method)

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**Abstract:** Till now 174 geometrical methods have supported that the Cosmic Pi equal to  $(14 - \text{root } 2) / 4 = 3.14644660941\dots$  is the true value, exact value and an algebraic number. And this Pi number also squared a circle. This is yet another method, in which, a sole line segment proves that Cosmic Pi is the real Pi.

**Keywords:** Circle, Diameter, Line segment, Square, Pi

### I. Introduction

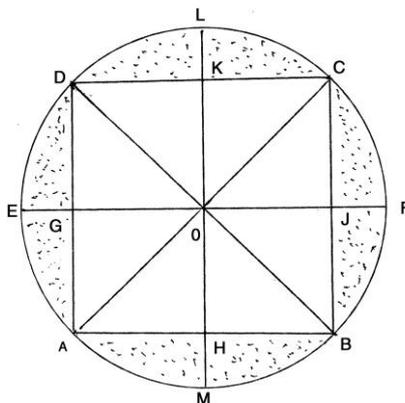
The line segments; side, base, altitude play a significant role in finding area and perimeter of, square and triangle. In addition to radius, we use constant  $\pi$  for circle, in calculating area and perimeter of it ( $2\pi r$  and  $\pi r^2$ ).

The formula  $\frac{\pi d^2}{4}$  is used in this paper as usual. Then what is the difference or new in this paper? A

necessity has come now, in view of the discovery of Cosmic  $\pi$ , equal to  $\frac{14 - \sqrt{2}}{4} = 3.14644660941\dots$

questioning the present  $\pi$  value 3.14159265358... which in fact, represents a polygon, in and about, a circle. This 3.14159265358 is called sometimes, as traditional  $\pi$ , limit  $\pi$ , polygonal  $\pi$ , Archimedean  $\pi$ , approximate  $\pi$  etc.

### Procedure



1. Circle : Diameter = EF = a

$$\text{Area of circle} = \frac{\pi a^2}{4}$$

2. Inscribe a square ABCD in the circle. Side = AB =  $\frac{\sqrt{2}a}{2}$

3. Area of square =  $\left(\frac{\sqrt{2}a}{2}\right)^2 = \frac{a^2}{2}$ .

4. Area in between circle and square is **shaded area**  $= \frac{\pi a^2}{4} - \frac{a^2}{2} = \left(\frac{\pi - 2}{4}\right)a^2$ .
5. The shaded area is divided into 8 smaller segments.  
Area of each smaller segment  $= \left(\frac{\pi - 2}{4}\right)a^2 \times \frac{1}{8} = \left(\frac{\pi - 2}{32}\right)a^2$
6. As there is a challenge from Cosmic  $\pi$  equal to  $\frac{14 - \sqrt{2}}{4}$  to the present  $\pi$  equal to 3.14159265358....this study has become imminent, to bring to the kind attention of the world of mathematics. Already more or less two decades have passed. GOD, a great **Cosmometrician** may be looking at us with an enormous mercy that we rectify the error in choosing limit  $\pi$  3.14159265358... of polygon as **Pi of the circle**. The relation between Cosmic  $\pi$  and this author is nothing. **The Cosmic  $\pi$  is, like air, water, light, a common property of humanity.**
7. Let us search for a **line segment** for  $\pi - 2$ , as  $\pi - 2$  is there in the above formula.
8.  $\pi - 2$  for traditional  $\pi = 1.14159265358$ ....
9.  $\pi - 2$  for Cosmic  $\pi = 1.14644660941$ ....
10. Radius  $OF = \frac{a}{2}$ ,  $OJ = \frac{\sqrt{2}a}{4}$
11. Then  $JF = HM = GE = KL = \text{Radius} - OJ = \frac{a}{2} - \frac{\sqrt{2}a}{4} = \left(\frac{2 - \sqrt{2}}{4}\right)a$   
 $= \frac{2 - \sqrt{2}}{4} = 0.14644660941$  when  $a = 1$
12. Step 5, where area of each smaller segment  $= \left(\frac{\pi - 2}{32}\right)a^2$  **is true.**
13. **When the above formula of smaller segment is true, why not we search for a line segment equal to  $\pi - 2$  in the above construction?**
14. However, it is **difficult** to find a line segment equal to  $\pi - 2$ . But it is seen **naturally**, a line segment equal to  $(\pi - 2) - 1 = \pi - 3$ .  
In that case, instead of a line segment for  $\pi - 2$ , let us search for  $\pi - 3$ :
15.  $\pi - 3$  of traditional  $\pi = 0.14159265358$ .
16.  $\pi - 3$  of Cosmic  $\pi = 0.14644660941$ .
17. So, we see a line segment for  $\pi - 3$  of Cosmic  $\pi$ .  
And it is also in **total agreement** with step 11 in value, where  $JF = HM = GE = KL$   
 $= \frac{2 - \sqrt{2}}{4} = 0.14644660941$  of **shaded region.**
18. As the area of smaller segment equal to  $\left(\frac{\pi - 2}{32}\right)a^2$  of step 12 is right, so also,  $\pi - 3 = \left(\frac{2 - \sqrt{2}}{4}\right)a$  of step 16 is also right. Because, step 16 = Step 17.

## II. Conclusion

The Cosmic  $\pi$  equal to  $\frac{14 - \sqrt{2}}{4} = 3.14644660941$  is the real  $\pi$  value. It is exact, and an algebraic number and is **based on the line segment** of the circle-square composite construction. Hence it is true that, there is **no difference** between square, triangle and circle **at the core**, although, they appear **different superficially**.

### III. Post Script

All the celestial bodies: Stars and planets are spherical in shape. Their dimensions, such as, perimeter, surface area and volume have been given values using traditional  $\pi=3.14159265358\dots$ . As Cosmic

$\pi : \frac{14 - \sqrt{2}}{4} = 3.14644660941$  proved as real  $\pi$ , and is greater than traditional  $\pi$ , **the values attributed**

**to stars and planets are lower by 0.15%**. This difference may be negligible at the day to day applications of  $\pi$ . But, at the astronomical magnitudes, this difference has **great impact**, especially in our Space Projects. The extract below is a practical experience of one Space Engineer who had direct link with it.

#### 805pi - The REAL PI

- **David G Dawson**

Nov 29, 2012

With thanks for guidance from Wayne Thompson of 'The Measuring System Of The Gods' I now have my answer for pi:

<http://www.jainmathemagics.com/page/10/default.asp>

**Pi does not equal 3.141592**

$$A = (14 - \text{ROOT } 2) \div 4$$

$$= 3.1464466\dots$$

I have always been suspicious of pi and the value we have been forced to use as in determining pi for something to wrap around a cylinder was always that little bit shorter than calculated.

There is a book available at the above site but is A\$60 but the above gives you an initial idea as to what is involved.

NASA, I should have remembered back in my tracking days that pi had been changed to accomodate entry and exit of spacecraft using a Planet for sling-shot acceleration to the next Planet (Voyager) but I never thought too much about that in those days.

This now needs to be applied to our Coils but we need to now know exactly which pi to use for that condition.

Different conditions - different pi.

More on this as it comes to hand.

Smokey

From the foregoing, it is clear that, Cosmic  $\pi$ , is like a rising Sun. And any amount of delaying in welcoming Cosmic  $\pi$  into the mainstream will affect every student, scholar, space engineer with the prevailing **incorrect picture of Cosmos**.