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FIJESRT INTERNATIONAL JOURNAL OF ENGINEERING SCIENCES & RESEARCH TECHNOLOGY PTOLEMY THEOREM SUPPORTS THE INDIAN Pi R. Sarva Jagannadha Reddy

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The Ptolemy Theorem (a Quadrilateral inscribed in a Circle) says about the relation between four sides and two diagonals of a Cyclic Quadrilateral. I am grateful to Claudius Ptolemaeus (100 – 170 AD) for, his theorem has helped to associate real / true π called the Indian π with it. The Official π equal to 3.141592653.....has NO LINE SEGMENTS for (π – 3) and (4 - π).

The Indian $\pi = \frac{14-\sqrt{2}}{4} = 3.146446609 \dots \dots$



$$CD = (\pi - 3) = \frac{2 - \sqrt{2}}{4}$$

$$AD, AB, BC = (4 - \pi) = \frac{2 + \sqrt{2}}{4}$$

 $AC, BD = \sqrt{4-\pi}$

The theorem says

 $AC \times BD = AB \times CD + BC \times AD$

$$\sqrt{4-\pi} \times \sqrt{4-\pi} = (4-\pi)(\pi-3) + (4-\pi)(4-\pi)$$

It is proved that the Indian π agrees with the Ptolemy Theorem.

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