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INTERNATIONAL JOURNAL OF ENGINEERING SCIENCES & RESEARCH TECHNOLOGY
PTOLEMY THEOREM SUPPORTS THE INDIAN Pi
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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 $(\pi - 3)$ and $(4 - \pi)$.

The Indian $\pi = \dfrac{14 - \sqrt{2}}{4} = 3.146446609 \ldots \ldots ..$
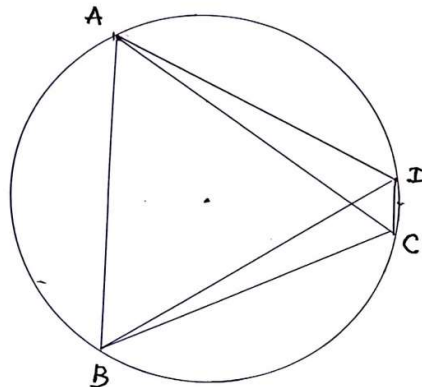
$$CD = (\pi - 3) = \frac{2 - \sqrt{2}}{4}$$

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

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

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.