

The Radian's Coincidence Conjecture :

$$\lim_{\alpha \rightarrow 90} (\tan(\alpha)) = \text{Radian's Angle} \times 10^{N \rightarrow \infty}$$

α in degrees

N is a positive integer ($N \in \mathbb{N}$)

Radian's Angle = $(360/2\pi) = 57.2957795131\dots$

Proof:

Tan (89.9) = **572.957213354...**

Tan (89.99) = **5729.57789313...**

Tan(89.9999) = **572957.795104...**

Radian's Angle = $(360/2\pi) = \mathbf{57.2957795131\dots}$

It becomes obvious that the nearer α is to **90 degrees**, its tangent equals precisely the angle of a radian multiplied by **10 power N**, where N is interpreted as the number of (**9**) in the decimal side of α . If α tends to **90 degrees**, N tends to infinity ($N \in \mathbb{N}$).

Commentary

This conjecture may be a tool in defining the indefinite tangent of 90 degrees, and is a (new) mathematical coincidence that is indeed strange; why would the tangent of angles near 90 degrees be equal to the angle of the radian multiplied by powers of 10? In fact, if there is no geometrical explanation in current mathematics, it may reside in *metamathematics*.