

MathsJam 2016

The constant F ... Wau
... a truly singular
number

The Mathematical Constant Wau ... F

- Symbol F ... pronounced wau, is the obsolete Greek letter Digamma.
- I was first introduced to Wau by the American Mathematics Vihart
- It is mathematical constant and was known to the Ancient Greeks, Babylonians and Egyptians.
- Has more than one way of representing it as an infinite decimal.
- Arguably more important than π , φ , i or e
- Zeno, Pythagoras and Ptolemy knew of it.

Some of my favourite properties of Wau

- $\Gamma(F) = \frac{1}{F}$ and $\Gamma\left(\frac{1}{F}\right) = F$

- $F^{\pi} F^{(2\pi)^F} F^{(3\pi)^{F^{\dots}}}$
 $= F \sqrt[2]{F \sqrt[3]{F \sqrt[4]{F \sqrt[5]{F \sqrt[6]{\dots}}}}}$

- $e^{\tau i} = F$

- $\sum_{k=1}^{\infty} \frac{1}{k} = \zeta(F)$

More properties of Wau

$$\varphi = F + \frac{1}{F + \frac{1}{F + \frac{1}{F + \frac{1}{F + \dots}}}}$$

x



y

If $\frac{x}{y} = F$

$$F = \frac{x + \frac{x}{y}}{y + \frac{y}{x}}$$

F is one
of the most important and interesting
numbers in mathematics

Please tell me your favourite property of Wau

- Write it on paper and leave on the box of chocolates
- Take a chocolate

That's all
folks

