

The well known Pythagorean theorem $x^2 + y^2 = z^2$ was proved to be invalid for other exponents. Meaning the next equation has no integer solutions:

$$x^n + y^n = z^n$$

$$f(x) = A \cdot \sin(\omega x + \Phi) \cdot e^{-x^2 \cdot \lambda}$$

$$f'(x) = A \cdot \omega \cdot \cos(\omega x + \Phi)$$

A - Amplitude

ω - Frequency

x - Interference rate

Φ - Phase shift

λ - Decay rate

$$\frac{\partial f}{\partial x} = f'(x) = 0$$

$$x = (\frac{\pi}{2} + 2k\pi - \Phi)/\omega$$

$$x = ((\pi/2.0) + 2.0 * k * \pi - \Phi)/\omega$$