11.2.19.

$$\frac{\pi}{4} = 1 - \frac{1}{3} + \frac{1}{5} - \frac{1}{7} + \ldots\ldots$$

Visas !

$$\frac{\pi}{4} = \sum_{m=0} \frac{(-1)^m}{2m+1}$$

$$f(x) = x + \pi , \quad -\pi < x < \pi$$

$$f \sim \pi + \sum_{n=1} \frac{2(-1)^{n+1}}{n} \sin nx$$

$$f(\frac{\pi}{2}) = \frac{\pi}{2} + \pi = \pi + \sum_{n=1} \frac{2(-1)^{n+1}}{n} \sin\frac{n\pi}{2}$$

$$\sin\frac{n\pi}{2} = \begin{cases} 0 \ , \ n = 2m \\ (-1)^m \ , \ n = 2m+1 \end{cases}$$

$$\frac{\pi}{4} = \sum_{m=0} \frac{(-1)^{2m+1+1}}{2m+1}(-1)^m = \sum_{m=0} \frac{(-1)^m}{2m+1}$$