

Procesos Infinitos

Sucesiones y series: sumas ad infinitum

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Agenda

1 Sucesiones y series

Progresión aritmética

Sumatoria Sigma

$$1 + 2 + 3 + 4 + \cdots + 100 = \sum_{i=1}^{100} i \quad (1)$$

$$2 + 4 + 6 + 8 + \cdots + 100 = \sum_{i=1}^{50} 2i \quad (2)$$

$$3 + 6 + 9 + 12 + \cdots + 300 = \sum_{i=1}^{100} 3i \quad (3)$$

$$50 + 51 + 52 + \cdots + 400 = \sum_{i=50}^{400} i \quad (4)$$

Progresión aritmética

Suma parcial

$$\sum_{i=1}^{100} i = \frac{100 \cdot 101}{2} \quad (1)$$

$$\sum_{i=1}^{50} 2i = \quad (2)$$

$$\sum_{i=1}^{100} 3i = \quad (3)$$

$$\sum_{i=50}^{40} i = \quad (4)$$

Progresión geométrica

Sumatoria Sigma

$$2 + 4 + 8 + 16 + \cdots + 1024 = \sum_{i=1}^{10} 2^i \quad (5)$$

$$3 + 9 + 27 + 81 + \cdots + 59049 = \sum_{i=1}^{10} 3^i \quad (6)$$

$$3 + 6 + 9 + 12 + \cdots + 300 = \sum_{i=1}^{100} 3i \quad (7)$$

$$50 + 51 + 52 + \cdots + 400 = \sum_{i=50}^{400} i \quad (8)$$

Sumatorias combinadas

Sumatoria Sigma

$$\sum_{i=1}^4 \frac{2i}{2i-1} = \quad (9)$$

$$\frac{\sum_{i=1}^4 2i}{\sum_{i=1}^4 2i-1} = \quad (10)$$