2. Sums and Products

Homework0 due Feb 8, 2023 08:59 -03 Completed

Summation Notation

4/4 points (graded)

Compute the following sums.

(Enter closed-form expressions, without summation notation, in terms of the variables
Refer to the “Standard Notation" button for help with input.)

1. $\sum_{i=0}^{N} 1 =$ N+1 ✔

$N+1$

2. $\sum_{k=1}^{K} \sum_{t=1}^{T} 1 =$ K*T ✔

$K \cdot T$

3. $\sum_{k=1}^{K} \sum_{t=1}^{T} 0.5^k =$ T - 2^(-K)*T ✔

$T - 2^{-K} \cdot T$

4. $\sum_{k=1}^{\infty} \sum_{t=1}^{T} 0.5^k =$ T ✔

T

Hint: If you are unfamiliar, look up arithmetic and geometric series.

? STANDARD NOTATION

Submit You have used 2 of 3 attempts

Product Notation

2.0/2.0 points (graded)

The notation $\prod_{i=1}^{N} p_i$ denotes the product with N factors:

$$\prod_{i=1}^{N} p_i = p_1 p_2 \cdots p_N$$

3.

? STANDARD NOTATION

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Previous Next

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