CHAPTER 1

SEQUENCES AND SERIES

1. SEQUENCES OF NUMBERS

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1.1. DEFINITIONS. if $f : D \to R$ is a function whose domain D admits the set I_p of consecutive integers $p, p+1, p+2, ..., n, ...$ as a subset, then the infinitely many numbers

$$f(p), f(p+1), ..., f(n), ... \tag{1.1}$$

written in this order, is called an infinite sequence or simply a sequence, where $f(p), f(p+1), ..., f(n), ...$ are called the first term, the second term, ... , the general term respectively.

[1] For brevity one denotes $f(n)$ usually by a letter with the subscript n, say a_n, and the sequence (1) by

$$(f(n))_p^\infty \text{ or } (a_n)_p^\infty$$

or more simply by

$$(f(n))_p \text{ or } (a_n)_p$$

Examples

$(n)_1$: $1, 2, 3, ..., n, ...$

$(\frac{n}{n-2})_3$: $3, \frac{4}{2}, \frac{5}{3}, ..., \frac{n}{n-2}, ...$

[1] In the book it writes brievity,but it think,it should be brevity