List of Symbols

\(\oplus\) : Discrete direct sum
\(\sum\) : Complete direct sum
\(\omega\) : First limit ordinal
\(\omega_1\) : First uncountable ordinal
\(B = \oplus B_i\) : Basic submodule of \(M\)
\(B_i\) : Direct sum of uniserial modules of length \(i\)
\(B_n^\omega\) : \(B_{n+1} \oplus B_{n+2} \oplus \ldots\)
\(\overline{B}\) : \(\sum_{i=1}^{\infty} B_i\)
\(d(M)\) : Decomposition length of \(M\)
\(e(x)\) : Exponent of \(x\)
\(g(M)\) : Cardinality of the minimal generating set of \(M\)
\(f_\alpha(M, N)\) : \(\alpha^{th}-Ulm\) invariant of \(M\) relative to \(N\)
\(f_\alpha(m)\) : \(\alpha^{th}-Ulm\) invariant of \(M\)
\(\inf g\) : Inf \(g(H_k(M))\)
\(H(x)\) : Height of \(x\)
\(H_M(x)\) : Height of \(x\) in \(M\)
\(H_k(M)\) : Submodule of \(M\) generated by the uniform elements of height at least \(k\)
\(H^k(M)\) : Submodule of \(M\) generated by the uniform elements of exponent at most \(k\)
\(M^\infty\) : Submodule of \(M\) generated by the uniform elements of infinite height