Theorem 1 (Residue Theorem). Let f be analytic in the region G except for the isolated singularities $a_1, a_2, \dots, a_m$. If γ is a closed rectifiable curve in G which does not pass through any of the points a_k and if $\gamma \approx 0$ in G then

$$\operatorname*{Res}_{z=a} f(z) = \operatorname*{Res}_{a} f = \frac{1}{2\pi \mathrm{i}} \int\limits_{C} f(z)\,\mathrm{d}z,$$

where $C \subset D \backslash \{a\}$ is a closed line $n(C, a) = 1$ (e. g. a counterclockwise circle loop).

$\mathrm{A}\Lambda\Delta\nabla\mathrm{BCD}\Sigma\mathrm{EF}\Gamma\mathrm{GHIJ}\mathit{KLMNO}\Theta\Omega\mathrm{P}\Phi\Pi\Xi\mathsf{QRST}\mathit{UVWXY}\Upsilon\Psi\mathrm{Z}$ ABCDabcd1234
$a\alpha b\beta c\partial d\delta e\epsilon\varepsilon f\zeta\xi g\gamma h\hbar\iota i\imath j k\kappa l\ell\lambda m n\eta\theta\vartheta o\sigma\varsigma\phi\varphi\wp p\rho\varrho q r s t\tau\pi u\mu\nu v\upsilon w\omega\varpi$

$xyz\infty \propto \emptyset y = f(x)$ $\textstyle\sum\int\prod$ $\displaystyle\prod\int\sum$ $\textstyle\sum_a^b\int_a^b\prod_a^b$ $\displaystyle\sum_a^b\int_a^b\prod_a^b$