Theorem 1 (Residue theorem). *Let* f *be analytic in the region* G *except for the isolated singularities* $a_1, a_2, \ldots, a_m$*. 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*

$$\frac{1}{2\pi i} \int\limits_{\gamma} f\left(x^{N \in \mathbb{C}^{N \times 10}}\right) = \sum_{k=1}^{m} n(\gamma; a_k) \operatorname{Res}(f; a_k).$$

Theorem 2 (Maximum modulus). *Let* G *be a bounded open set in* $\mathbb{C}$ *and suppose that* f *is a continuous function on* G^- *which is analytic in* G*. Then*

$$\max\{\, |f(z)| : z \in G^- \,\} = \max\{\, |f(z)| : z \in \partial G \,\}.$$

First some large operators both in text: $\iiint\limits_{Q} f(x, y, z)\, dx\, dy\, dz$ and $\prod_{\gamma \in \Gamma_{\tilde{C}}} \partial(\tilde{X}_\gamma)$; and also on display

$$\iiiint\limits_{Q} f(w, x, y, z)\, dw\, dx\, dy\, dz \leqslant \oint_{\partial Q} f' \left(\max \left\{ \frac{\|w\|}{|w^2 + x^2|}; \frac{\|z\|}{|y^2 + z^2|}; \frac{\|w \oplus z\|}{|x \oplus y|} \right\} \right).$$

SOURCE

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