1 The modern option

Theorem (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*

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

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

$$\max\left\{|f(z)| : z \in \overline{G}\right\} = \max\{|f(z)| : z \in \partial G\}$$

First some large operators both in text: $\iiint_Q f(x,y,z)\,\mathrm{d}\,x\,\mathrm{d}\,y\,\mathrm{d}\,z$ and $\prod_{\gamma \in \Gamma_{\bar{C}}} \partial(\tilde{X}_\gamma)$; and also on display

$$\iiiint_Q f(w,x,y,z)\,\mathrm{d}\,w\,\mathrm{d}\,x\,\mathrm{d}\,y\,\mathrm{d}\,z \le \oint_{\partial Q} f'\left(\max\left\{\frac{\|w\|}{|w^2+x^2|}; \frac{\|z\|}{|y^2+z^2|}; \frac{\|w \oplus z\|}{|x \oplus y|}\right\}\right).$$