Mathematical typesetting with XITS

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

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

$$\lessapprox \biguplus_{\mathbb{Q} \in \bar{\mathbf{Q}}} \left[f^*\left(\frac{\int \mathbb{Q}(t) \mathbb{L}}{\sqrt{1 - t^2}} \right) \right]_{t=\alpha}^{t=\vartheta} - (\Delta + \nu - \upsilon)^3 \tag{1}$$

For x in the open interval $]-1, 1[$ the infinite sum in Equation (2) is convergent; however, this does not hold throughout the closed interval $[-1, 1]$.

$$(1 - x)^{-k} = 1 + \sum_{j=1}^{\infty} (-1)^j \begin{Bmatrix} k \\ j \end{Bmatrix} x^j \quad \text{for } k \in \mathbb{N}; k \neq 0. \tag{2}$$