Mathematical typesetting with Times (TX)

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

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

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

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].

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