

Advanced Mathematical Document Test

Logic and Set Theory:

- Universal quantification: $\forall x (x^2 \geq 0)$
- Existential quantification: $\exists y (y > 10)$
- Logical operations: $(P \wedge Q) \vee (R \wedge S)$
- Set operations: $A \cap B \cup C \subseteq D$
- Relations: $x \leq y \wedge z \leq w$

Calculus and Analysis:

- Integration: $\int_{-\infty}^{\infty} e^{-x^2} dx = \sqrt{\pi}$
- Summation: $\sum_{i=1}^n i^2 = \frac{n(n+1)(2n+1)}{6}$
- Greek letters: $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, \omicron, \pi, \rho, \sigma, \tau, \upsilon, \phi, \chi, \psi, \omega$

This document tests the complete mathematical notation rendering system.