

Sample Latex Equations

Basic Algebraic Equations

$$ax^2 + bx + c = 0$$

$$x = \frac{-b \pm \sqrt{b^2 - 4ac}}{2a}$$

Derivatives & Integrals

$$\frac{d}{dx} (x^n) = n x^{n-1}$$

$$\int x^n dx = \frac{x^{n+1}}{n+1} + C, \quad n \neq -1$$

$$\int e^x dx = e^x + C$$

Trigonometry

$$\sin^2 x + \cos^2 x = 1$$

$$\tan x = \frac{\sin x}{\cos x}$$

Limits & Series

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$$\lim_{x \rightarrow 0} \frac{\sin x}{x} = 1$$

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$$e^x = \sum_{n=0}^{\infty} \frac{x^n}{n!}$$

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Probability & Statistics

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$$P(A \cup B) = P(A) + P(B) - P(A \cap B)$$

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$$E(X) = \sum_{i=1}^n x_i P(x_i)$$

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