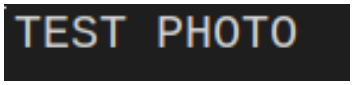
Learning LaTex - Day1

YL TING

July 22, 2021



Font Size

tiny

scriptsize

footnotesize

normalsize

large

LARGE

huge

Huge

Font Style

Normal text

Bold text

Italic text

Underlined text

emphasis text

double emphasis text

underlined text but will not over the block margin,useful for long underlined string

Double underlined text

Wavy underlined text

Display Style Math

$$f(x) = (x+2)^2 - 9$$

$$\begin{aligned} f(x) &= a_2 x^{ky} + a_1 x + a_0 \\ &= x^2 + 4x - 5 \end{aligned} \tag{1}$$

$$\begin{aligned} 2x + 1 &= 9 \\ 2x &= 8 \\ x &= 4 \end{aligned} \qquad \begin{aligned} 3y - 2 &= -5 \\ 3y &= -3 \\ y &= -1 \end{aligned} \qquad \begin{aligned} -5z - 8 &= 3 \\ -5z &= -5 \\ z &= -1 \end{aligned}$$

Inline or Text Style Math

Inline equation example $f(x) = x^2 + 4x - 5$ test test.
Inline equation example $f(x) = x^2 + 4x - 5$ test test.

some equation in two mode have different notaion

$$DisplayStyleMath \sum_{n=1}^{\infty} \frac{1}{n^2} = \frac{\pi^2}{6}$$

Inline or Text Style Math $\sum_{n=1}^{\infty} \frac{1}{n^2} = \frac{\pi^2}{6}$

Basic Math Notation

Arithmetic

$1 + 1$
$5 - 3$
$6 \cdot 4$
6×4
$27 \div 9$

Fractions

$$\frac{numerator}{denominator}$$

$$\frac{numerator}{denominator}$$

$\frac{numerator}{denominator}$

Superscript and Subscript

Use of Brackets for Grouping

with Brackets: e^{kx}

without Brackets: $e^k x$

Simutaneous Superscript and Subscript

a sub-1 squared: a_1^2

a squared sub-1: a_1^2

Combined Superscripts and Subscripts

Stacked: $p_1^{a_1}$

Offset: ${p_1}^{a_1}$

Parentheses

(a)

$\left(\text{a} \right)$

$\left(\text{a} \right)$

$\left(\text{a} \right)$

$\left(\text{a} \right)$

$$\left(\frac{numerator}{denominator} \right)$$

Text in Math Mode

$n = ab$ where a and b are natural numbers

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Greek Letters

alpha: αA
beta: βB
gamma: $\gamma \Gamma$
delta: $\delta \Delta$
epsilon: $\epsilon \varepsilon E$
zeta: ζZ
eta: ηH
theta: $\theta \vartheta \Theta$
iota: ιI
kappa: κK
lambda: $\lambda \Lambda$
mu: μM
nu: νN
xi: $\xi \Xi$
omeicron: oO
pi: $\pi \Pi$
rho: $\rho \varrho P$
sigma: $\sigma \Sigma$
tau: τT
upsilon: $\upsilon \Upsilon$
phi: $\phi \varphi \Phi$
chi: χX
psi: $\psi \Psi$
omega: $\omega \Omega$

AMS Blackboard Font

Natual Number: $\mathbb{N}$
Integer: $\mathbb{Z}$
Rational Number: $\mathbb{Q}$
Real Number: $\mathbb{R}$
Complex Number: $\mathbb{C}$