Sample math symbols

Son To

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Contents

Chapter 1

Single equations

Add a squared and b squared to get c squared. Or, using the more mathematical approach: $a^2 + b^2 = c^2$

TEX is pronounced as $\tau\epsilon\chi$

100 m^3 of water

This comes from my *heartsuit*

Add a squared and b squared to get c squared. Or, using the more mathematical approach:

$$a^2 + b^2 = c^2 \tag{1.1}$$

Einstein says

$$E = mc^2 \tag{1.2}$$

He didn't say

$$1 + 1 = 3 \qquad \text{(bollocks)}$$

This is a reference to (1.2).

Add a squared to b squared to get c squared. Or, using a more mathematical approach

$$a^2 + b^2 = c^2$$

or you can type less for the same effect

$$a^2 + b^2 = c^2$$

This is text style: $\lim_{n\to\infty} \sum_{k=1}^{n} \frac{1}{k^2} = \frac{\pi^2}{6}$. And this is the display style:

$$\lim_{n\to\infty} \sum_{k=1}^{n} \frac{1}{k^2} = \frac{\pi^2}{6} \tag{1.3}$$

A $d_{e_{e_p}}$ mathematical expression followed by a $h_{i_{g_h}}$ expression. As opposed to a smashed $d_{e_{e_p}}$ expression followed by a $h_{i_{g_h}}$ expression.

$\forall x \in \mathbf{R}: \qquad x^2 \geq 0$

$x^2 \geq 0 \qquad$ for all $x \in \mathbf{R}$

$x^2 \geq 0$ for all $x \in \mathbb{R}$

$p_{ij}^3 \quad m_{\mathrm{Knuth}} \quad \sum_{k=1}^{n} k$

$\mathrm{a}^x + y \neq a^{x+y} \quad e^{x^2} \neq e^{x2}$

$\sqrt{2} \Leftrightarrow x^{1/2} \quad \sqrt[3]{2} \quad \sqrt{x^2 + \sqrt{y}} \quad \sqrt{x^2 + y^2}$

$\Psi = v_1 \cdot v_2 \cdot \ldots \quad n! = 1 \cdot 2 \cdots (n-1) \cdot n$

$0.\overline{3} = \underline{\underline{1/3}}$

$$\overbrace{\underbrace{a+b+c}_{\text{Advanced Calculus}} \cdot \overbrace{d+e+f}^{9}}^{6} = 54$$

$f(x) = x^2 \quad f'(x) = 2x \quad f''(x) = 2$

$\hat{XY} \quad \widehat{XY} \quad \bar{x}_0 \quad \underline{\bar{x}_0}$

$\vec{a} \quad \vec{AB} \quad \overrightarrow{AB}$

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

$$\mathrm{JamesComey} = \mathrm{nutjob}_{x=D.Trump}$$

$a \bmod b$

$x \equiv a \pmod{b}$

In in-line equations, the fraction $\frac{1}{2}$(text style) is shrunk to fit the line. The reverse of which is $\dfrac{1}{2}$(display style). A built-in fraction is $\tfrac{1}{2}$

$$\sqrt{\frac{x^2}{k+1}} \qquad x^{\frac{2}{k+1}} \qquad \frac{\partial^2 f}{\partial x^2}$$

Pascal's rule is

$$\binom{n}{k} = \binom{n-1}{k} + \binom{n-1}{k-1}$$

$$f_n(x) \overset{d}{\succ} f_m(x)$$

$$\int_0^{\frac{\pi}{2}} x^2 \, \mathrm{d}x \qquad \sum_{i=1}^{n} i \qquad \prod_{\epsilon}$$

$$\sum_{\substack{0<i<n \\ j \subseteq i}}^{n} P(i,j) = Q(i,j)$$

$$a, b, c \neq \{a, b, c\}$$

$$1 + \left(\frac{1}{1-x^2} \right)^3 \qquad \ddagger \text{-} \Big)$$

$$\Big((x+1)(x-1)\Big)^3$$

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