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

Add a squared and b squared to get c squared

$$a^2 + b^2 = c^2 \tag{1}$$

Einstein says

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

This is a reference to (2).

It's wrong to say

$$1 + 1 = 3 \tag{dumb}$$

or

$$1 + 1 = 4$$

Again...

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

or you can type less for the same effect:

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

or if you like the long one:

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

In text: $\lim_{n \to \infty} \sum_{k=1}^n \frac{1}{k^2} = \frac{\pi^2}{6}$.
In display:

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

$f''(x)$

In display style:

$$3/8 \qquad \frac{3}{8} \qquad \tfrac{3}{8}$$

In text style: $1\frac{1}{2}$ hours $\qquad 1\dfrac{1}{2}$ hours

Pascal's rule is

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

$\neq \leq \geq \approx \neq \leq \geq$

$$f_n(x) \stackrel{*}{\approx} 1$$

$\times \div \cdot \pm \mp \nabla \partial$

$\ker \dim \hom \deg \limsup \liminf \sup \det \Pr \gcd$

$a \bmod b$

$x \equiv a \pmod{b}$

$$\operatorname{argh} 3 = \operatorname*{Nut}_{x=1} 4x$$

In text: $\sum_{i=1}^n$ $\int_0^{\frac{\pi}{2}}$ $\oint_0^{\frac{\pi}{2}}$ $\prod_\epsilon$
In display:

$$\sum_{i=1}^n \quad \int_0^{\frac{\pi}{2}} \quad \oint_0^{\frac{\pi}{2}} \quad \prod_\epsilon$$

In text: $\sum\limits_{i=1}^n$ $\int\limits_0^{\frac{\pi}{2}}$ $\prod\limits_\epsilon$
In display:

$$\sum\nolimits_{i=1}^n \quad \int\limits_0^{\frac{\pi}{2}} \quad \prod\nolimits_\epsilon$$

$$\sum_{\substack{0\le i\le n\\ j\in\mathbb{R}}} P(i,j) = Q(n)$$

$$\sum_{\begin{subarray}{l} 0\le i\le n\\ j\in\mathbb{R}\end{subarray}} P(i,j) = Q(n)$$

$\bar{x}_0$ $\vec{x}_1$ $\hat{x}_2$
$\underline{1/3} = 0.\overline{3}$
$\underline{\underline{\underline{\hat{X}Y}}}$ $\widehat{XY}$ $\overrightarrow{AB}$
$\underbrace{\overbrace{a+b+c}^{6} \cdot \overbrace{d+e+f}^{7}}_\text{meaning of life} = 42$

$$a \xleftarrow{x+y+z} b$$

$$c \xrightarrow[x<y]{a*b*c} d$$

$$1 + \left(\frac{1}{1-x^2}\right)^3 \qquad \left.\frac{\partial f}{\partial t}\right|_{t=0}$$

$\Big((x+1)(x-1)\Big)^2$
$(\big(\Big(\bigg(\Bigg(\quad \}\big\}\Big\}\bigg\} \quad \| \big\| \Big\| \bigg\| \Bigg\| \quad \Downarrow \big\Downarrow \Big\Downarrow \bigg\Downarrow \Bigg\Downarrow$

$$\begin{multline} a+b+c+d+e+f+g+h+i \\ = j+k+l+m+n \\ = o+p+q+r+s \\ = t+u+v+x+z \tag{3} \end{multline}$$

$$
\begin{aligned}
a &= b + c \qquad (4)\\
&= d + e + f + g + h + i + j + k + l\\
&\quad + m + n + o \qquad (5)\\
&= p + q + r + s \qquad (6)
\end{aligned}
$$

$$
\begin{aligned}
a &= b + c \qquad (7)\\
d &= e + f + g \qquad (8)\\
h + i &= j + k\\
l + m &= n \qquad (9)
\end{aligned}
$$

$$
\begin{aligned}
a &= b + c\\
d &= e + f + g\\
h + i &= j + k\\
l + m &= n
\end{aligned}
\qquad (10)
$$

$$
\mathbf{X} = \left(\begin{array}{cccc} x_{11} & x_{12} & \ldots & x_{1n}\\ x_{21} & x_{22} & \ldots & x_{2n}\\ \vdots & \vdots & \ddots & \vdots\\ x_{n1} & x_{n2} & \ldots & x_{nn} \end{array} \right)
$$

$$
|x| = \left\{ \begin{array}{rl} -x & \text{if } x < 0,\\ 0 & \text{if } x = 0,\\ x & \text{if } x > 0. \end{array} \right. \qquad (11)
$$

$$
|x| = \begin{cases} -x & \text{if } x < 0,\\ 0 & \text{if } x = 0,\\ x & \text{if } x > 0. \end{cases} \qquad (12)
$$

$$
\begin{matrix} 1 & 2\\ 3 & 4 \end{matrix} \qquad \begin{bmatrix} x_{11} & x_{12} & \ldots & x_{1n}\\ x_{21} & x_{22} & \ldots & x_{2n}\\ \vdots & \vdots & \ddots & \vdots\\ x_{n1} & x_{n2} & \ldots & x_{nn} \end{bmatrix}
$$

$$
\mathbf{H} = \begin{bmatrix} \dfrac{\partial^2 f}{\partial x^2} & \dfrac{\partial^2 f}{\partial x \partial y}\\ \dfrac{\partial^2 f}{\partial x \partial y} & \dfrac{\partial^2 f}{\partial y^2} \end{bmatrix}
$$

$$
\begin{aligned}
&aa \qquad\quad a\;a \\
&a\quad a \\
&a\qquad a \\
&a\,a \\
&a\:a \\
&a\;a \\
&a\!a
\end{aligned}
\tag{13}
$$

$$\int \iint \iiint \iiiint$$

$\mathcal{R}$ $\mathfrak{R}$ $\mathbb{R}$

$$\mathcal{L} = -\frac{1}{4}F_{\mu\nu}F^{\mu\nu}$$

$\mathfrak{su}(2)$ and $\mathfrak{so}(3)$ Lie algebra

$$P = \frac{\sum_{i=1}^{n}(x_i - x)(y_i - y)}{\left[\sum_{i=1}^{n}(x_i - x)^2 \sum_{i=1}^{n}(y_i - y)^2\right]^{1/2}}$$

μ, M $\boldsymbol{\mu}, \boldsymbol{M}$

My Theorem 0.1. *The light speed in vaccum is* $299,792,458\,\mathrm{m/s}$.

My Theorem 0.2 (Energy)**.** *The relationship of energy, momentum and mass is*

$$E^2 = m_0^2c^4 + p^2c^2$$

where c is the light speed described in theorem 0.1.

Law 1. Don't hide in the witness box.

Jury 2 (The Twelve)**.** *It could be you! So beware and see law 1.*

Jury 3. *You will disregard the last statement.*

Margaret. No, No, No

Margaret. Denis!

Proof. For simplicity, we use

$$E = mc^2$$

That's it. □

Proof. For simplicity, we use

$$E = mc^2 \qquad \square$$