This is a torture test for math fonts.

Testing with `thinmuskip` = 3.0mu, `medmuskip` = 4.0mu plus 2.0mu minus 4.0mu, `thickmuskip` = 5.0mu plus 5.0mu, `scriptspace` = 0.5pt, `delimitershortfall` = 5.0pt, `delimiterfactor` = 901, `mathsurround` = 0.0pt, `nulldelimiterspace` = 1.2pt.

Letters: $-A'-B'-C'-D'-E'-F'-G'-H'-I'-J'-K'-L'-M'-N'-O'-P'-Q'-R'-S'-T'-U'-V'-W'-X'-Y'-Z'$

$-a'-b'-c'-d'-e'-f'-g'-h'-i'-j'-k'-l'-m'-n'-o'-p'-q'-r'-s'-t'-u'-v'-w'-x'-y'-z'$

$-\alpha'-\beta'-\gamma'-\delta'-\epsilon'-\zeta'-\eta'-\theta'-\vartheta'-\iota'-\kappa'-\lambda'-\mu'-\nu'-\xi'-\pi'-\varpi'-\rho'-\sigma'-\tau'-\upsilon'-\phi'-\varphi'-\chi'-\psi'-\omega'$

$-\Gamma'-\Delta'-\Theta'-\Lambda'-\Xi'-\Pi'-\Sigma'-\Upsilon'-\Phi'-\Psi'-\Omega'$

$-\mathcal{A}'-\mathcal{B}'-\mathcal{C}'-\mathcal{D}'-\mathcal{E}'-\mathcal{F}'-\mathcal{G}'-\mathcal{H}'-\mathcal{I}'-\mathcal{J}'-\mathcal{K}'-\mathcal{L}'-\mathcal{M}'-\mathcal{N}'-\mathcal{O}'-\mathcal{P}'-\mathcal{Q}'-\mathcal{R}'-\mathcal{S}'-\mathcal{T}'-\mathcal{U}'-\mathcal{V}'-\mathcal{W}'-\mathcal{X}'-\mathcal{Y}'-\mathcal{Z}'$

Miscellanous ordinary symbols: $\aleph x \quad \hbar x \quad \ell x \quad \wp x \quad \Re x \quad \Im x \quad \partial x \quad \infty x \quad \emptyset x \quad \nabla x \quad \surd x \quad \top x \quad \bot x \quad \| x \quad \angle x \quad \triangle x \quad \backslash x \quad \forall x \quad \exists x \quad \neg x \quad \flat x \quad \natural x \quad \sharp x \quad \clubsuit x \quad \diamondsuit x \quad \heartsuit x \quad \spadesuit x \quad !x \quad ?x \quad .x \quad |x \quad /x \quad `x \quad @x \quad "x$

(Display style) Digits: 0123456789, $0\mathrm{123456789}$

(Text style) Digits: 0123456789, $0\mathrm{123456789}$

(Script style) Digits: 0123456789, $0\mathrm{123456789}$

(Scriptscript style) Digits: 0123456789, $0\mathrm{123456789}$

Large operators: $\sum_b^a B \quad \prod_b^a B \quad \coprod_b^a B \quad \int_b^a B \quad \oint_b^a B \quad \bigcap_b^a B \quad \bigcup_b^a B \quad \bigsqcup_b^a B \quad \bigvee_b^a B \quad \bigwedge_b^a B \quad \bigodot_b^a B \quad \bigotimes_b^a B \quad \bigoplus_b^a B \quad \biguplus_b^a B$

Large operators: $\displaystyle\sum_a^b B \quad \prod_a^b B \quad \coprod_a^b B \quad \int_a^b B \quad \oint_a^b B \quad \bigcap_a^b B \quad \bigcup_a^b B \quad \bigsqcup_a^b B \quad \bigvee_a^b B \quad \bigwedge_a^b B \quad \bigodot_a^b B \quad \bigotimes_a^b B \quad \bigoplus_a^b B \quad \biguplus_a^b B$

Binary operators: $A \pm x \quad A \cap x \quad A \vee x \quad A \mp x \quad A \cup x \quad A \wedge x \quad A \setminus x \quad A \uplus x \quad A \oplus x \quad A \cdot x \quad A \sqcap x \quad A \ominus x \quad A \times x \quad A \sqcup x \quad A \otimes x \quad A * x \quad A \lhd x \quad A \oslash x \quad A \star x \quad A \rhd x \quad A \odot x \quad A \diamond x \quad A \wr x \quad A \dagger x \quad A \circ x \quad A \bigcirc x \quad A \ddagger x \quad A \bullet x \quad A \triangle x \quad A \amalg x \quad A \div x \quad A \bigtriangledown x \quad A * x \quad A + x \quad A - x$

(Display style) Mod: $\gcd(m,n) = \gcd(n, m \bmod n)$, and $x \equiv y + 1 \pmod{m^2}$.

(Text style) Mod: $\gcd(m,n) = \gcd(n, m \bmod n)$, and $x \equiv y + 1 \pmod{m^2}$.

(Script style) Mod: $\gcd(m,n)=\gcd(n,m \bmod n)$, and $x \equiv y+1 \pmod{m^2}$.

(Scriptscript style) Mod: $\gcd(m,n)=\gcd(n,m \bmod n)$, and $x \equiv y+1 \pmod{m^2}$.

Relations: $x \leq A \quad x \geq A \quad x \equiv A \quad x \prec A \quad x \succ A \quad x \approx A \quad x \preceq A \quad x \succeq A \quad x \simeq A \quad x \subset A \quad x \supset A \quad x \sim A \quad x \subseteq A \quad x \supseteq A \quad x \simeq A \quad x \sqsubseteq A \quad x \sqsupseteq A \quad x \cong A \quad x \in A \quad x \ni A \quad x \vdash A \quad x \vDash A \quad x \parallel A \quad x = A \quad x < A \quad x > A \quad x \mid A \quad x \propto A \quad x \ll A \quad x \gg A \quad x \bowtie A \quad x \dashv A \quad x \smile A \quad x \frown A \quad x \doteq A \quad x \perp A \quad x : A$

Negated Relations: $y \not\leq B \quad y \not\geq B \quad y \not\equiv B \quad y \not\prec B \quad y \not\succ B \quad y \not\approx B \quad y \not\preceq B \quad y \not\succeq B \quad y \not\simeq B \quad y \not\subset B \quad y \not\supset B \quad y \not\sim B \quad y \not\subseteq B \quad y \not\supseteq B \quad y \not\simeq B \quad y \not\sqsubseteq B \quad y \not\sqsupseteq B \quad y \not\cong B \quad y \notin B \quad y \not\ni B \quad y \nvdash B \quad y \nvDash B \quad y \nparallel B \quad y \neq B \quad y \not< B \quad y \not> B \quad y \nmid B \quad y \not\propto B \quad y \not\ll B \quad y \not\gg B \quad y \not\bowtie B \quad y \not\dashv B \quad y \not\smile B \quad y \not\frown B \quad y \neq B \quad y \not\perp B \quad y \notin B$

Arrows: $B \leftarrow y \quad B \longleftarrow y \quad B \uparrow y \quad B \Leftarrow y \quad B \Longleftarrow y \quad B \Uparrow y \quad B \rightarrow y \quad B \longrightarrow y \quad B \downarrow y \quad B \Rightarrow y \quad B \Longrightarrow y \quad B \Downarrow y \quad B \leftrightarrow y \quad B \longleftrightarrow y \quad B \updownarrow y \quad B \Leftrightarrow y \quad B \Longleftrightarrow y \quad B \Updownarrow y \quad B \mapsto y \quad B \longmapsto y \quad B \nearrow y \quad B \hookleftarrow y \quad B \hookrightarrow y \quad B \searrow y \quad B \leftharpoonup y \quad B \rightharpoonup y \quad B \swarrow y \quad B \leftharpoondown y \quad B \rightharpoondown y \quad B \nwarrow y \quad B \rightleftharpoons y$

(Display style) Buildrel: $\overset{\alpha\beta}{\longrightarrow}$, and $\overset{\text{def}}{=}$.

(Text style) Buildrel: $\overset{\alpha\beta}{\longrightarrow}$, and $\overset{\text{def}}{=}$.

(Script style) Buildrel: $\overset{\alpha\beta}{\longrightarrow}$, and $\overset{\text{def}}{=}$.

(Scriptscript style) Buildrel: $\overset{\alpha\beta}{\longrightarrow}$, and $\overset{\text{def}}{=}$.

Delimiters:

$$\left(.\left(.\left(.\left(.\left(.(.\,(\bullet)\,.).\right).\right).\right).\right).\right) \qquad \left[.\left[.\left[.\left[.\left[.[.\,[\bullet]\,.].\right].\right].\right].\right].\right]$$

$$\left\{.\left\{.\left\{.\left\{.\left\{.\{.\,\{\bullet\}\,.\}.\right\}.\right\}.\right\}.\right\}.\right\} \qquad \left\lfloor.\left\lfloor.\left\lfloor.\left\lfloor.\left\lfloor.\lfloor.\,\lfloor\bullet\rfloor\,.\rfloor.\right\rfloor.\right\rfloor.\right\rfloor.\right\rfloor.\right\rfloor$$

$$\left\lceil.\left\lceil.\left\lceil.\left\lceil.\left\lceil.\lceil.\,\lceil\bullet\rceil\,.\rceil.\right\rceil.\right\rceil.\right\rceil.\right\rceil.\right\rceil \qquad \left\langle.\left\langle.\left\langle.\left\langle.\left\langle.\langle.\,\langle\bullet\rangle\,.\rangle.\right\rangle.\right\rangle.\right\rangle.\right\rangle.\right\rangle$$

$$\left\llbracket.\left\llbracket.\left\llbracket.\left\llbracket.\left\llbracket.\llbracket.\,\llbracket\bullet\rrbracket\,.\rrbracket.\right\rrbracket.\right\rrbracket.\right\rrbracket.\right\rrbracket \qquad \left\|.\left\|.\left\|.\left\|.\left\|.\|.\,\|\bullet\|\,.\|.\right\|.\right\|.\right\|.\right\|.\right\|$$

$$\left\uparrow.\left\uparrow.\left\uparrow.\left\uparrow.\left\uparrow.\uparrow.\,\uparrow\bullet\downarrow\,.\downarrow.\right\downarrow.\right\downarrow.\right\downarrow.\right\downarrow.\right\downarrow \qquad \left\updownarrow.\left\updownarrow.\left\updownarrow.\left\updownarrow.\left\updownarrow.\updownarrow.\,\updownarrow\bullet\updownarrow\,.\updownarrow.\right\updownarrow.\right\updownarrow.\right\updownarrow.\right\updownarrow.\right\updownarrow$$

$$\left\Uparrow.\left\Uparrow.\left\Uparrow.\left\Uparrow.\left\Uparrow.\Uparrow.\,\Uparrow\bullet\Downarrow\,.\Downarrow.\right\Downarrow.\right\Downarrow.\right\Downarrow.\right\Downarrow.\right\Downarrow \qquad \left\vert.\left\vert.\left\vert.\left\vert.\left\vert.\left\vert.\left\vert.\,\vert\bullet\vert\,.\vert.\right\vert.\right\vert.\right\vert.\right\vert.\right\vert.\right\vert$$

$$\left\backslash.\left\backslash.\left\backslash.\left\backslash.\left\backslash.\left\backslash.\left\backslash.\,\backslash\bullet/\,.\right/.\right/.\right/.\right/.\right/.\right/ \qquad \left/.\left/.\left/.\left/.\left/.\left/.\left/.\,/\bullet\backslash\,.\right\backslash.\right\backslash.\right\backslash.\right\backslash.\right\backslash.\right\backslash$$

$$\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{-1}}}}}}}}}$$

(Display style) Punctuation: $f\colon A \to B$, $L(a,b;c\colon x,y;z)$, $a.b : c,d,\ldots$, and $x_1 + \cdots + x_n$, don't forget $f(x_1,\ldots,x_n)$.

(Text style) Punctuation: $f\colon A \to B$, $L(a,b;c\colon x,y;z)$, $a.b : c,d,\ldots$, and $x_1 + \cdots + x_n$, don't forget $f(x_1,\ldots,x_n)$.

(Script style) Punctuation: $f\colon A\to B$, $L(a,b;c\colon x,y;z)$, $a.b\colon c,d$, …, and $x_1+\cdots+x_n$, don't forget $f(x_1,\ldots,x_n)$.

(Scriptscript style) Punctuation: $f\colon A\to B$, $L(a,b;c\colon x,y;z)$, $a.b\colon c,d$, …, and $x_1+\cdots+x_n$, don't forget $f(x_1,\ldots,x_n)$.

Fractions: $\frac{Z}{W}$ $\frac{Z}{W}$ $\binom{Z}{W}$ $\frac{Z}{W}$ $\left\langle\frac{Z}{W}\right\rangle$ $\left[\frac{Z}{W}\right]$ $\left\{\frac{Z}{W}\right\}$

Fractions: $\frac{g}{d}$ $\frac{g}{d}$ $\binom{g}{d}$ $\frac{g}{d}$ $\left\langle\frac{g}{d}\right\rangle$ $\left[\frac{g}{d}\right]$ $\left\{\frac{g}{d}\right\}$

Fractions: $\frac{b}{a}$ $\frac{b}{a}$ $\binom{b}{a}$ $\frac{b}{a}$ $\left\langle\frac{b}{a}\right\rangle$ $\left[\frac{b}{a}\right]$ $\left\{\frac{b}{a}\right\}$

(Display style) Roots: $\sqrt{2i}$, $\sqrt[3]{2}$, $\sqrt[n]{x^n+y^n}$, $\sqrt{a}+\sqrt{d}+\sqrt{y}$, and $\sqrt[n+1]{Q}$.

(Text style) Roots: $\sqrt{2i}$, $\sqrt[3]{2}$, $\sqrt[n]{x^n+y^n}$, $\sqrt{a}+\sqrt{d}+\sqrt{y}$, and $\sqrt[n+1]{Q}$.

(Script style) Roots: $\sqrt{2i}$, $\sqrt[3]{2}$, $\sqrt[n]{x^n+y^n}$, $\sqrt{a}+\sqrt{d}+\sqrt{y}$, and $\sqrt[n+1]{Q}$.

(Scriptscript style) Roots: $\sqrt{2i}$, $\sqrt[3]{2}$, $\sqrt[n]{x^n+y^n}$, $\sqrt{a}+\sqrt{d}+\sqrt{y}$, and $\sqrt[n+1]{Q}$.

Filling: $\overline{o}$ $\underline{o}$ $\hat{o}$ $\tilde{o}$ $\overbrace{o}$ $\underbrace{o}$

Filling: $\overline{A+\cdots-Q-\cdots+g}$ $\underline{A+\cdots-Q-\cdots+g}$ $A+\cdots\widehat{-Q-}\cdots+g$ $A+\cdots\widetilde{-Q-}\cdots+g$
$\overbrace{A+\cdots-Q-\cdots+g}$ $\underbrace{A+\cdots-Q-\cdots+g}$

Accents: $-\hat{A}+\hat{q}-\check{A}+\check{q}-\tilde{A}+\tilde{q}-\acute{A}+\acute{q}-\grave{A}+\grave{q}-\dot{A}+\dot{q}-\ddot{A}+\ddot{q}-\breve{A}+\breve{q}-\bar{A}+\bar{q}-\vec{A}+\vec{q}$
$\hat{A}\hat{B}\hat{C}\hat{D}\hat{E}\hat{F}\hat{G}\hat{H}\hat{I}\hat{J}\hat{K}\hat{L}\hat{M}\hat{N}\hat{O}\hat{P}\hat{Q}\hat{R}\hat{S}\hat{T}\hat{U}\hat{V}\hat{W}\hat{X}\hat{Y}\hat{Z}$ $\hat{a}\hat{b}\hat{c}\hat{d}\hat{e}\hat{f}\hat{g}\hat{h}\hat{i}\hat{j}\hat{k}\hat{l}\hat{m}\hat{n}\hat{o}\hat{p}\hat{q}\hat{r}\hat{s}\hat{t}\hat{u}\hat{v}\hat{w}\hat{x}\hat{y}\hat{z}$
$\hat{\Gamma}\hat{\Delta}\hat{\Theta}\hat{\Lambda}\hat{\Xi}\hat{\Pi}\hat{\Sigma}\hat{\Upsilon}\hat{\Phi}\hat{\Psi}\hat{\Omega}$ $\hat{\Gamma}\hat{\Delta}\hat{\Theta}\hat{\Lambda}\hat{\Xi}\hat{\Pi}\hat{\Sigma}\hat{\Upsilon}\hat{\Phi}\hat{\Psi}\hat{\Omega}$
$\hat{\alpha}\hat{\beta}\hat{\gamma}\hat{\delta}\hat{\epsilon}\hat{\zeta}\hat{\eta}\hat{\theta}\hat{\imath}\hat{\kappa}\hat{\lambda}\hat{\mu}\hat{\nu}\hat{\xi}\hat{\pi}\hat{\rho}\hat{\sigma}\hat{\tau}\hat{\upsilon}\hat{\phi}\hat{\chi}\hat{\psi}\hat{\omega}\hat{\varepsilon}\hat{\vartheta}\hat{\varpi}\hat{\varrho}\hat{\varsigma}\hat{\varphi}$ $\hat{\partial}\hat{\ell}\hat{\jmath}\hat{\wp}$
$\hat{\mathcal{A}}\hat{\mathcal{B}}\hat{\mathcal{C}}\hat{\mathcal{D}}\hat{\mathcal{E}}\hat{\mathcal{F}}\hat{\mathcal{G}}\hat{\mathcal{H}}\hat{\mathcal{I}}\hat{\mathcal{J}}\hat{\mathcal{K}}\hat{\mathcal{L}}\hat{\mathcal{M}}\hat{\mathcal{N}}\hat{\mathcal{O}}\hat{\mathcal{P}}\hat{\mathcal{Q}}\hat{\mathcal{R}}\hat{\mathcal{S}}\hat{\mathcal{T}}\hat{\mathcal{U}}\hat{\mathcal{V}}\hat{\mathcal{W}}\hat{\mathcal{X}}\hat{\mathcal{Y}}\hat{\mathcal{Z}}$
$x+y-z$, $x+y*z$, $z*y/z$, $(x+y)(x-y)=x^2-y^2$,
$x\times y\cdot z=[x\,y\,z]$, $x\circ y\bullet z$, $x\cup y\cap z$, $x\sqcup y\sqcap z$,
$x\vee y\wedge z$, $x\pm y\mp z$, $x=y/z$, $x:=y$, $x\le y\ne z$, $x\sim y\simeq z\; x\equiv y\not\equiv z$, $x\subset y\subseteq z$
$\sin 2\theta=2\sin\theta\cos\theta$, $\mathrm{O}(n\log n\log n)$, $\Pr(X>x)=\exp(-x/\mu)$,
$(x\in A(n)\mid x\in B(n))$, $\bigcup_n X_n\,||\,\bigcap_n Y_n$
In text matrices $\left(\begin{smallmatrix}1&1\\0&1\end{smallmatrix}\right)$ and $\left(\begin{smallmatrix}a&b&c\\1&m&n\end{smallmatrix}\right)$

$$a_0+\cfrac{1}{a_1+\cfrac{1}{a_2+\cfrac{1}{a_3+\cfrac{1}{a_4}}}}$$

$$\binom{p}{2}x^2y^{p-2}-\frac{1}{1-x}\frac{1}{1-x^2}=\frac{a+1}{b}\Big/\frac{c+1}{d}.$$

$$\sqrt{1+\sqrt{1+\sqrt{1+\sqrt{1+\sqrt{1+x}}}}}$$

$$\left(\frac{\partial^2}{\partial x^2}+\frac{\partial^2}{\partial y^2}\right)|\varphi(x+iy)|^2=0$$

$$\pi(n)=\sum_{m=2}^{n}\left\lfloor\left(\sum_{k=1}^{m-1}\lfloor(m/k)/\lceil m/k\rceil\rfloor\right)^{-1}\right\rfloor.$$

$$\int_0^\infty\frac{t-ib}{t^2+b^2}e^{iat}\,dt=e^{ab}E_1(ab),\quad a,b>0.$$

$$A = \begin{pmatrix} x-\lambda & 1 & 0 \\ 0 & x-\lambda & 1 \\ 0 & 0 & x-\lambda \end{pmatrix}.$$

$$\begin{bmatrix} a & b & c \\ d & e & f \end{bmatrix} \begin{bmatrix} u & x \\ v & y \\ w & z \end{bmatrix}$$

$$A = \begin{pmatrix} a_{11} & a_{12} & \dots & a_{1n} \\ a_{21} & a_{22} & \dots & a_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ a_{m1} & a_{m2} & \dots & a_{mn} \end{pmatrix}$$

$$M = \begin{array}{c} \\ C \\ I \\ C' \end{array} \begin{array}{c} \begin{array}{ccc} C & I & C' \end{array} \\ \begin{pmatrix} 1 & 0 & 0 \\ b & 1-b & 0 \\ 0 & a & 1-a \end{pmatrix} \end{array}$$

$$\sum_{n=0}^{\infty} a_n z^n \qquad \text{converges if} \qquad |z| < \left(\limsup_{n\to\infty} \sqrt[n]{|a_n|} \right)^{-1}.$$

$$\frac{f(x+\Delta x) - f(x)}{\Delta x} \to f'(x) \qquad \text{as } \Delta x \to 0.$$

$$\|u_i\| = 1, \qquad u_i \cdot u_j = 0 \quad \text{if } i \neq j.$$

$$\textit{The confluent image of} \quad \left\{ \begin{array}{l} \textit{an arc} \\ \textit{a circle} \\ \textit{a fan} \end{array} \right\} \quad \textit{is} \quad \left\{ \begin{array}{l} \textit{an arc} \\ \textit{an arc or a circle} \\ \textit{a fan or an arc} \end{array} \right\}.$$

$$\begin{aligned} T(n) \leq T(2^{\lceil \lg n \rceil}) &\leq c(3^{\lceil \lg n \rceil} - 2^{\lceil \lg n \rceil}) \\ &< 3c \cdot 3^{\lg n} \\ &= 3c\, n^{\lg 3}. \end{aligned}$$

$$\left\{ \begin{array}{l} \alpha = f(z) \\ \beta = f(z^2) \\ \gamma = f(z^3) \end{array} \right\} \qquad \left\{ \begin{array}{l} x = \alpha^2 - \beta \\ y = 2\gamma \end{array} \right\}.$$

$$\begin{aligned} (x+y)(x-y) &= x^2 - xy + yx - y^2; && (3) \\ &= x^2 - y^2; && (4) \\ (x+y)^2 &= x^2 + 2xy + y^2. && (5) \end{aligned}$$

$$\begin{aligned}\left(\int_{-\infty}^{\infty} e^{-x^2}\,dx\right)^2 &= \int_{-\infty}^{\infty}\int_{-\infty}^{\infty} e^{-(x^2+y^2)}\,dx\,dy \\ &= \int_0^{2\pi}\int_0^{\infty} e^{-r^2}\,dr\,d\theta \\ &= \int_0^{2\pi}\left(-\frac{e^{-r^2}}{2}\Big|_{r=0}^{r=\infty}\right)d\theta \\ &= \pi. \end{aligned} \tag{11}$$

$$\prod_{k\geq 0}\frac{1}{(1-q^k z)} = \sum_{n\geq 0} z^n \Big/ \prod_{1\leq k\leq n}(1-q^k).$$

$$\sum_{\substack{0<i\leq m\\ 0<j\leq n}} p(i,j) \neq \sum_{i=1}^{p}\sum_{j=1}^{q}\sum_{k=1}^{r} a_{ij}b_{jk}c_{ki} \neq \sum_{\substack{1\leq i\leq p\\ 1\leq j\leq q\\ 1\leq k\leq r}} a_{ij}b_{jk}c_{ki}$$

$$\max_{1\leq n\leq m}\log_2 P_n \quad \text{and} \quad \lim_{x\to 0}\frac{\sin x}{x} = 1$$

$$p_1(n) = \lim_{m\to\infty}\sum_{\nu=0}^{\infty}\left(1-\cos^{2m}(\nu!^n\pi/n)\right)$$

$$\widehat{s}, \widehat{ss}, \widehat{sss}, \widehat{ssss}, \widehat{sssss}, \widehat{f}, \widehat{ff}, \widehat{fff}, \widehat{ffff}, f\widehat{fff}$$

$$\widetilde{s}, \widetilde{ss}, \widetilde{sss}, \widetilde{ssss}, \widetilde{sssss}, \widetilde{f}, \widetilde{ff}, \widetilde{fff}, \widetilde{ffff}, f\widetilde{fff}$$

$$\int f(x)\,dx \quad \int f(x)\,dx \quad \int f(x)\,dx \quad \int f(x)\,dx \quad \int f(x)\,dx$$

$$\int_0^1 f(x)\,dx = \frac{\sqrt{3}}{2} \neq \frac{\sqrt{2\pi}}{\sqrt{3}}$$

$$\sqrt{x}, \sqrt{\pi}, \sqrt{x^2}, \sqrt{\frac{a}{b}}, \sqrt{\frac{a^2+b^2}{a^2-b^2}}, \sqrt{\sum_{i\neq j}^{n<m}\frac{a^2+b^2}{a^2-b^2}}$$

$$\frac{(x+10y)(x-10y)}{x^2-100y^2} = 1 + \frac{a+\frac{x}{y}+c}{2+\frac{5^2}{\epsilon_2}-9}$$

$$30^\circ, 60^\circ, 90^\circ, 120^\circ$$

$$\sum_{i=1}^{n}\int_0^x f(x)\,dx = \sqrt[n+1]{a^n+b^n} = \frac{\pi}{2}$$

$$\overbrace{x+y} = \underbrace{x+y} = x_{n-2}^{i}$$

$$\overline{x+y} = \underline{x+y} = x_{n}^{-2}$$

$$\left(\left(\left(\left(\left(\left((x)^2\right)^2\right)^2\right)^2\right)^2\right)^2 \qquad \left[\left[\left[\left[\left[\left[x\right]^2\right]^2\right]^2\right]^2\right]^2\right]^2$$

$$\begin{pmatrix} A & B & C & D & E & F \\ G & H & H & I & J & K \\ L & M & N & O & P & Q \\ R & S & T & U & V & W \end{pmatrix} = \begin{bmatrix} A & B & C & D & E & F \\ G & H & H & I & J & K \\ L & M & N & O & P & Q \\ R & S & T & U & V & W \end{bmatrix}.$$

$$\begin{pmatrix} \begin{pmatrix} \begin{pmatrix} a & b \\ c & d \end{pmatrix} & \begin{pmatrix} e & f \\ g & h \end{pmatrix} \\ 0 & \begin{pmatrix} i & j \\ k & l \end{pmatrix} \end{pmatrix} & \begin{pmatrix} \begin{pmatrix} a & b \\ c & d \end{pmatrix} & \begin{pmatrix} e & f \\ g & h \end{pmatrix} \\ 0 & \begin{pmatrix} i & j \\ k & l \end{pmatrix} \end{pmatrix} \\ \begin{pmatrix} \begin{pmatrix} a & b \\ c & d \end{pmatrix} & \begin{pmatrix} e & f \\ g & h \end{pmatrix} \\ 0 & \begin{pmatrix} i & j \\ k & l \end{pmatrix} \end{pmatrix} & \begin{pmatrix} \begin{pmatrix} a & b \\ c & d \end{pmatrix} & \begin{pmatrix} e & f \\ g & h \end{pmatrix} \\ 0 & \begin{pmatrix} i & j \\ k & l \end{pmatrix} \end{pmatrix} \end{pmatrix}.$$

n^{th} root

$\mathbf{S}^{-1}\mathbf{T}\mathbf{S} = \mathbf{dg}(\omega_1, \ldots, \omega_n) = \Lambda$

$\Pr(\, m = n \mid m + n = 3\,)$

$\sin 18^\circ = \frac{1}{4}(\sqrt{5} - 1)$

$k = 1.38 \times 10^{-16}\,\text{erg}/^\circ\text{K}$

$\bar{\Phi} \subset NL_1^*/N = \bar{L}_1^* \subseteq \cdots \subseteq NL_n^*/N = \bar{L}_n^*$

$I(\lambda) = \iint_D g(x,y) e^{i\lambda h(x,y)}\, dx\, dy$

$\int_0^1 \cdots \int_0^1 f(x_1, \ldots, x_n)\, dx_1 \ldots dx_n$

$$x_{2m} \equiv \begin{cases} Q(X_m^2 - P_2 W_m^2) - 2S^2 & (m \text{ odd}) \\ P_2^2(X_m^2 - P_2 W_m^2) - 2S^2 & (m \text{ even}) \end{cases} \pmod N.$$

$$(1 + x_1 z + x_1^2 z^2 + \cdots) \ldots (1 + x_n z + x_n^2 z^2 + \cdots) = \frac{1}{(1 - x_1 z) \ldots (1 - x_n z)}.$$

$$\prod_{j \geq 0} \left(\sum_{k \geq 0} a_{jk} z^k \right) = \sum_{n \geq 0} z^n \left(\sum_{\substack{k_0, k_1, \ldots \geq 0 \\ k_0 + k_1 + \cdots = n}} a_{0k_0} a_{1k_1} \ldots \right).$$

$$\frac{(n_1 + n_2 + \cdots + n_m)!}{n_1!\, n_2! \ldots n_m!} = \binom{n_1 + n_2}{n_2} \binom{n_1 + n_2 + n_3}{n_3} \cdots \binom{n_1 + n_2 + \cdots + n_m}{n_m}.$$

$$\Pi_R \begin{bmatrix} a_1, a_2, \ldots, a_M \\ b_1, b_2, \ldots, b_N \end{bmatrix} = \prod_{n=0}^{R} \frac{(1-q^{a_1+n})(1-q^{a_2+n})\ldots(1-q^{a_M+n})}{(1-q^{b_1+n})(1-q^{b_2+n})\ldots(1-q^{b_N+n})}.$$

$$\sum_{p \text{ prime}} f(p) = \int_{t>1} f(t)\, d\pi(t).$$

$$\{\underbrace{\overbrace{a,\ldots,a}^{k\ a\text{'s}},\overbrace{b,\ldots,b}^{l\ b\text{'s}}}_{k+l \text{ elements}}\}.$$

$$\begin{pmatrix} \begin{pmatrix} a & b \\ c & d \end{pmatrix} & \begin{pmatrix} e & f \\ g & h \end{pmatrix} \\ 0 & \begin{pmatrix} i & j \\ k & l \end{pmatrix} \end{pmatrix}.$$

$$\det \begin{vmatrix} c_0 & c_1 & c_2 & \ldots & c_n \\ c_1 & c_2 & c_3 & \ldots & c_{n+1} \\ c_2 & c_3 & c_4 & \ldots & c_{n+2} \\ \vdots & \vdots & \vdots & & \vdots \\ c_n & c_{n+1} & c_{n+2} & \ldots & c_{2n} \end{vmatrix} > 0.$$

$$\sum_{x\in A}' f(x) \stackrel{\text{def}}{=} \sum_{\substack{x\in A \\ x\neq 0}} f(x).$$

$$2 \uparrow\uparrow k \stackrel{\text{def}}{=} 2^{2^{2^{\cdot^{\cdot^{\cdot^{2}}}}}}\Big\}k.$$

$$\begin{array}{ccccccccc} & & & & & & 0 & & \\ & & & & & & \downarrow & & \\ 0 & \longrightarrow & \mathcal{O}_C & \xrightarrow{\iota} & \mathcal{E} & \xrightarrow{\rho} & \mathcal{L} & \longrightarrow & 0 \\ & & \| & & \downarrow\phi & & \downarrow\psi & & \\ 0 & \longrightarrow & \mathcal{O}_C & \longrightarrow & \pi_*\mathcal{O}_D & \xrightarrow{\delta} & R^1 f_*\mathcal{O}_V(-D) & \longrightarrow & 0 \\ & & & & & & \downarrow \theta_i\otimes\gamma^{-1} & & \\ & & & & & & R^1 f_*(\mathcal{O}_V(-iM))\otimes\gamma^{-1} & & \\ & & & & & & \downarrow & & \\ & & & & & & 0 & & \end{array}$$

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