$y = 2x - 1$

$y = 2x - 1$
$y = 2x - 1$
$x^2 - 1$

$$x^2 - 1$$

$x^{2y}, x^{2y^x}, X_{n_1}^{2y^z}$
$2^{2^{2^{2^{2^{2^{2^2}}}}}}$
$f'(x) \quad f'''(x)|_{x=0}$
$\pi, \Phi, \Sigma, \mu, \alpha$
$\mathit{\Gamma\Pi\Phi}$는 $\Gamma\Pi\Phi$와 다르다.
$\mathit{\Psi\Theta\Omega}$는 $\Psi\Theta\Omega$와 다르다.
$\sqrt[n]{x}$, $\sqrt[3]{ax+b}$, $\sqrt[2]{5}$, $\sqrt{2}$, $\sqrt[x]{2}$

$$\sqrt{1+\sqrt{1+\sqrt{1+\sqrt{1+\sqrt{1+\sqrt{1+x}}}}}} \quad . \ . \ . \ . \ . \ . \ . \ . \ . \ . \ . \ . \qquad (1)$$

$$\sqrt{a} \quad \sqrt{d} \quad \sqrt{g}$$

$(x_1 + \cdots + x_n)$
$(a_1, \ldots, a_m)$
$\ldots(...)$
$\dfrac{x^2+1}{y_1^2-1}$
$1 + \frac{1}{1+\frac{1}{1+\frac{1}{1+\frac{1}{1+x}}}}$
$\frac{1}{2}$, $\frac{x}{2}$
$\mathcal{S}$를 $\mathcal{S} = \{A \mid A \ni \mathcal{T}\}$라 하자.
$\not\emptyset, \emptyset$
$\not\ni, \not\subset, \not<$
$\lim_{n\to\infty}$

$$\lim_{n\to\infty}$$

$\limsup_n$

$$\liminf_{n \longrightarrow \infty}$$

$$liminf_{n \longrightarrow \infty}$$

$a \bmod b \qquad y \pmod{a+b}$

$\iint \cdots \int f dP$

$1/\log n \qquad 1/\log$

$\sqrt{4}\, n$

$f(x;\mu,\sigma) = \frac{1}{\sqrt{2\pi}\sigma} \exp\Bigl\{ -\frac{(x-\mu)^2}{2\sigma^2} \Bigr\}$

$$f(x;\mu,\sigma) = \frac{1}{\sqrt{2\pi}\sigma} \exp\Bigl\{ -\frac{(x-\mu)^2}{2\sigma^2} \Bigr\}$$

$$f(x;\mu,\sigma) = \frac{1}{\sqrt{2\pi}\sigma} \exp\{ -\frac{(x-\mu)^2}{2\sigma^2} \}$$

디스플레이 스타일:

$$\sum_{i=1}^{n} x_i = \int_0^1 f$$

텍스트 스타일: $\sum_{i=1}^{n} x_i = \int_0^1 f$

$\dfrac{a-b}{c+d}$ 와 $\tfrac{a-b}{c+d}$

$\dfrac{a-b}{c+d}$

$\frac{a-b}{c+d}$

$\vec{x} + \vec{y} = \begin{cases} a \\ b \end{cases}$

$\mathbf{A} = \begin{pmatrix} a_{11} & a_{12} & a_{13} \\ a_{21} & a_{22} & a_{23} \\ a_{31} & a_{32} & a_{33} \end{pmatrix}$

$$\widehat{a-1} = \widetilde{x-y} + \widehat{\mathrm{Cov}}$$

$\begin{array}{lcc} a & b & c \\ a-b & b-c & c-a \\ x^2+2x+1 & x^2+2x+1 & x^2+2x+1 \end{array}$

$$\begin{array}{c} a_{11}x_1 + a_{12}x_2 + \cdots + a_{1n}x_n = b_1 \\ a_{11}x_1 + a_{12}x_2 + \cdots + a_{1n}x_n = b_1 \\ \vdots \\ a_{11}x_1 + a_{12}x_2 + \cdots + a_{1n}x_n = b_1 \end{array} \qquad (2)$$

$$\left(\begin{array}{c} \begin{vmatrix} a & b \\ c & d \end{vmatrix} \\ e \\ f \end{array} \right)$$

$$x^n = \overbrace{x \times x \times \cdots \times x}$$

$$\overbrace{a + \underbrace{b + \overline{c + d}} + e}$$

$$\overbrace{a + \underbrace{b + c}_{123} + e}^{ab}$$

$$\frac{p(x_i|\boldsymbol{x}_{-i})}{1 - p(x_i|\boldsymbol{x}_{-i})} = \theta_1 \sum_{i=1}^{m} x_i + \beta_1 \sum_{\text{nbr}} x_i x_{i'} \quad . \; . \; . \; . \; . \; . \; . \; . \; . \; . \; . \; . \tag{3}$$

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

$$\begin{aligned} (x+y)^2 &= x^2 + xy + yx + y^2 \quad . \; . \; . \; . \; . \; . \; . \; . \; . \; . \; . \; . \; . \; . \tag{6} \\ &= x^2 + 2xy + y^2 \end{aligned}$$

$$\begin{aligned} & a + b + c + d + e + f + g + h + i + j + k + l = \\ & \quad x + y + z + a + b + c + d + e + f + g + o + s + t + \\ & \quad u + v + w \end{aligned}$$

Math italic $different$ is from *different*.

$$f(x) = \begin{cases} x & if x > 2 or if x < -2 \\ x & \text{if} x > 2 \text{orif} x < -2 \\ x & \text{if } x > 2 \text{ or if } x < -2 \end{cases} \quad . \; . \; . \; . \; . \; . \; . \; . \; . \; . \; . \; . \tag{7}$$

Form $\mathrm{e^{pdf}} + \Phi(\mathrm{x})$

$Form\ e^{pdf} + \mathit{\Phi}(x)$

$\mathtt{Form\ e^{pdf}} + \mathtt{\Phi(x)}$
$\mathbf{Form\ e^{pdf}} + \mathbf{\Phi(x)}$
$\mathsf{Form\ e^{pdf}} + \mathsf{\Phi(x)}$
$\mathcal{ABC}$

$$\mathbf{a} = (a_1, a_2, \ldots, a_n)^T$$

$\boldsymbol{a = (a_1, a_2, \ldots, a_n)^T}$
$\boldsymbol{a}= (a_1, a_2, \ldots, a_n)^T$
$\boldsymbol{a} = (a_1, a_2, \ldots, a_n)^T$
$\boldsymbol{aX + \beta + \gamma}$
$\boldsymbol{aX + \beta + \gamma}$
$A \xrightarrow{f} B \xrightarrow{g} C$
$AAAAA$
$\dfrac{a+b}{c-d}$
$\frac{a+b}{c-d}$
$1 + \frac{1}{1+\frac{1}{1+\frac{1}{1+\frac{1}{1+\frac{1}{1+x}}}}}$
$1 + \cfrac{1}{1 + \cfrac{1}{1 + \cfrac{1}{1 + \cfrac{1}{1 + \cfrac{1}{1+x}}}}}$

$$\text{표준편차} = \sqrt{\text{분산}} = \sqrt{\frac{\text{편차}^2\text{의 합}}{\text{표본의 개수} - 1}} \quad \cdots\cdots\cdots\cdots \tag{8}$$

$\int_0^\infty f(x)dx$
$\int\limits_0^\infty f(x)dx$
$\displaystyle\int\limits_0^\infty f(x)dx$
$\int_0^\infty f(x)dx$
$\displaystyle\int_0^\infty f(x)dx$
$\inf \sup_{n\to\infty} f_n(x)$

$\inf\limits_{n\to\infty} \sup f_n(x)$

$\inf\limits_{\substack{n\to\infty\\ \text{woops}}} \sup f_n(x)$

$\inf \sup^{\text{woops}}_{n\to\infty} f_n(x)$

$$\sum_{\substack{i,j=1,n\\ i\neq j}}$$

$\displaystyle\sum_{i,j=1,n i\neq j}$

$\binom{2n}{n}$, ${}_{2n}\mathrm{C_n}$

$\left(\begin{array}{c} 2n \\ n \end{array}\right)$

$$\binom{2n}{n}$$

$\genfrac{[}{]}{0pt}{}{x}{2y}$

$\genfrac{\{}{\}}{0pt}{}{a-c}{b}$

$${}^{231}_{73}\mathrm{U}$$

$${}^{231}_{73}\mathrm{U}$$

$$x + \left\langle \begin{matrix} a+b \\ c \end{matrix} \right\rangle$$

$$x + \left\uparrow \begin{matrix} a+b \\ c \end{matrix} \right\downarrow$$

$$B = \begin{pmatrix} \lambda & l \\ a & \alpha \end{pmatrix}$$

$$B = \left(\begin{array}{cc} \lambda & l \\ a & \alpha \end{array} \right)$$

$$A = \bordermatrix{ & n_1 & n_2 & n_3 \cr m_1 & A_{11} & A_{12} & A_{13} \cr m_2 & A_{21} & A_{22} & A_{23} }$$

$$A = \begin{array}{cc} & \begin{array}{ccc} n_1 & n_2 & n_3 \end{array} \\ \begin{array}{c} m_1 \\ m_2 \end{array} & \left(\begin{array}{ccc} A_{11} & A_{12} & A_{13} \\ A_{21} & A_{22} & A_{23} \end{array} \right) \end{array}$$

$$f(x) = \begin{cases} x & \text{for } x > 0 \\ -x & \text{for } -1 < x \le 0 \\ x^2 & \text{otherwise} \end{cases}$$

$$f(x) = \left\{ \begin{array}{rl} x & \text{for } x > 0 \\ -x & \text{for } -1 < x \le 0 \\ x^2 & \text{otherwise} \end{array} \right.$$

$$\frac{a+b}{c+d}$$

$$\frac{a+b}{c+d}$$

$$\{x \middle| x \in X\}$$

$$\{x \;\middle|\; x \in X\}$$

$$\{x \middle| x \in X\}$$

$$\{x \middle| x \in X\}$$

$$\Bigg\{ \bigg\{ \Big\{ \big\{ \{\} \big\} \Big\} \bigg\} \Bigg\}$$

$$|b - |x+y||$$

$$\Big| b - |x+y| \Big|$$

$$\frac{1}{\sqrt{2\pi}\sigma} \exp\{-\frac{(x-\mu)^2}{2\sigma^2}\} \text{ if } \mu = 0, \sigma = 1 \tag{9a}$$

$$\frac{1}{\sqrt{2\pi}\sigma} \exp\{-\frac{x^2}{2\sigma^2}\} \text{ if } \mu = 0 \tag{9b}$$

$$\frac{1}{\sqrt{2\pi}} \exp\{-\frac{x^2}{2}\} \text{ if } \mu = 0, \sigma = 1 \tag{9c}$$

식 9b와 9c는 식 9a의 특별한 경우이다.

$\mathbb{ABCDER}$

$\mathfrak{MathfrackFont}$

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$$\sum_{\substack{i=j\\ j<k\\ j\neq k}} x_{ij}^{j-k}$$

$$\iiint\limits_{\substack{x\in A\\ y\in B\\ C\ni z}} f(x,y,z)dxdydz$$

$$\sum_{}^{\sum^{m-n}_{}{}^{n}} x_{ij}$$

$$\begin{multline} a = d+e+f+g+h+i+j+k+l+m \\ +q+r+s+t+u+v+w+x+y+x+z \\ +q+r+s+t+u+v+w+x+y+z \\ = e+f+g+h+i+j+k+l+m+z+y+x+m_2 \end{multline} \tag{10}$$

$$(x+y)^2 = x^2+2xy+y^2 \tag{11}$$
$$(x+y+z)^2 = x^2+y^2+z^2+2xy+2yz+2zx \tag{12}$$

$$(x+y)^2 = x^2+2xy+y^2 \tag{13}$$
$$(x+y+z)^2 = x^2+y^2+z^2+2xy+2yz+2zx \tag{14}$$

$$a_{11} = a_{12} \qquad a_{13} = a_{14} \tag{15}$$
$$(x+y)^2 = (x+y)(x+y)x^2+2xy+y^2 = z^2 \tag{16}$$
$$f(x) = \frac{1}{(1+x^2)} \qquad g(x) = \sqrt{2\pi} \tag{17}$$

$$\begin{aligned} a &= \alpha \\ b &= \beta\beta \\ c &= \gamma\gamma\gamma \end{aligned} \quad \text{versus} \quad \begin{aligned} D &= \Delta\Delta\Delta \\ e &= \epsilon\epsilon \\ Z &= \Omega \end{aligned} \quad \ldots\ldots\ldots\ldots \tag{18}$$

$$\begin{gathered} a = \alpha \\ b = \beta\beta \\ c = \gamma\gamma\gamma \end{gathered} \quad \text{versus} \quad \begin{gathered} D = \Delta\Delta\Delta \\ e = \epsilon\epsilon \\ Z = \Omega \end{gathered} \quad \ldots\ldots\ldots\ldots \tag{19}$$

$$\begin{aligned} f(x) &= \mathcal{F}(x) g(x) = \mathcal{G}(x) \\ f(x) &= \mathfrak{F}(x)\, g(x) = \mathfrak{G}(x) \end{aligned} \quad \text{where} \quad \begin{aligned} \mathfrak{F} &= \mathbb{F} \\ \mathfrak{G} &= \mathbb{G} \end{aligned} \quad \ldots\ldots\ldots \tag{20}$$

$$f(x) = \mathcal{F}(x) \qquad g(x) = \mathcal{G}(x) \qquad \mathcal{G} = \mathbb{G} \tag{21}$$

$$f(x) = \mathfrak{F}(x) \qquad g(x) = \mathfrak{G}(x) \qquad \mathcal{F} = \mathbb{F} \tag{22}$$

$$\begin{aligned} f(x) &= \mathcal{F}(x) & g(x) &= \mathcal{G}(x) & \mathcal{G} &= \mathbb{G} \\ f(x) &= \mathfrak{F}(x) & g(x) &= \mathfrak{G}(x) & \mathcal{F} &= \mathbb{F} \end{aligned}$$

$$P_{i-j} = \begin{cases} 0 & \text{if } r-j \text{ is odd} \\ r!(-1)^{i-j} & \text{if } r-j \text{ is even} \end{cases} \quad \ldots\ldots\ldots\ldots \tag{23}$$

$$a_1 = a_0 + d \tag{24}$$

$$a_2 = a_1 + d = a_0 + 2d \tag{25}$$

in general

$$a_n = a_{n-1} + d = a_0 + nd \tag{26}$$

$$a_1 = a_0 + d \quad \ldots\ldots\ldots\ldots\ldots\ldots \tag{27a}$$

$$a_n = a_{n-1} + d \quad \ldots\ldots\ldots\ldots\ldots\ldots \tag{27b}$$

$$\begin{gathered} A_1, A_2, \ldots, A_1, A_2, \ldots \\ A_1 + A_2 + \cdots, A_1 + A_2 + \cdots \\ \text{곱하기} A_1 A_2 \cdots, A_1 A_2 \cdots \\ \int_{A_1} \int_{A_2} \cdots \int_{A_1} \int_{A_2} \cdots \end{gathered}$$