## 1 Math Alphabets

#### Default

0, 1, 2, 3, 4, 5, 6, 7, 8, 9,

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,

 $A, B, \Gamma, \Delta, E, Z, H, \Theta, I, K, \Lambda, M, N, \Xi, O, \Pi, P, \Sigma, T, \Upsilon, \Phi, X, \Psi, \Omega$ 

 $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, o, \pi, \rho, \sigma, \tau, \upsilon, \phi, \chi, \psi, \omega, \epsilon, \vartheta, \varpi, \varrho, \varsigma, \phi,$ 

#### Math Normal (\mathnormal)

0, 1, 2, 3, 4, 5, 6, 7, 8, 9,

A, B, C, D, E, F, G, H, I, I, 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, g, r, s, t, u, v, w, x, y, z,

 $A, B, \Gamma, \Delta, E, Z, H, \Theta, I, K, \Lambda, M, N, \Xi, O, \Pi, P, \Sigma, T, \Upsilon, \Phi, X, \Psi, \Omega,$ 

 $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, o, \pi, \rho, \sigma, \tau, \upsilon, \phi, \chi, \psi, \omega, \epsilon, \vartheta, \varpi, \varrho, \varsigma, \phi,$ 

#### Math Italic (\mathit)

0, 1, 2, 3, 4, 5, 6, 7, 8, 9,

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,

 $A, B, \Gamma, \Delta, E, Z, H, \Theta, I, K, \Lambda, M, N, \Xi, O, \Pi, P, \Sigma, T, \Upsilon, \Phi, X, \Psi, \Omega,$ 

 $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, o, \pi, \rho, \sigma, \tau, \upsilon, \phi, \chi, \psi, \omega, \epsilon, \theta, \varpi, \varrho, \varsigma, \phi,$ 

#### Math Roman (\mathrm)

0, 1, 2, 3, 4, 5, 6, 7, 8, 9,

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,

A, B,  $\Gamma$ ,  $\Delta$ , E, Z, H,  $\Theta$ , I, K,  $\Lambda$ , M, N,  $\Xi$ , O,  $\Pi$ , P,  $\Sigma$ , T,  $\Upsilon$ ,  $\Phi$ , X,  $\Psi$ ,  $\Omega$ ,

 $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, o, \pi, \rho, \sigma, \tau, \nu, \phi, \chi, \psi, \omega, \epsilon, \theta, \varpi, \rho, \varsigma, \phi, \phi$ 

#### Math Italic Bold (\mathbm)

0, 1, 2, 3, 4, 5, 6, 7, 8, 9,

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,

 $A, B, \Gamma, \Delta, E, Z, H, \Theta, I, K, \Lambda, M, N, \Xi, O, \Pi, P, \Sigma, T, \Upsilon, \Phi, X, \Psi, \Omega$ 

 $\alpha, \beta, \gamma, \delta, \epsilon, \zeta, \eta, \theta, \iota, \kappa, \lambda, \mu, \nu, \xi, \boldsymbol{o}, \pi, \rho, \sigma, \tau, \upsilon, \phi, \chi, \psi, \omega, \epsilon, \vartheta, \varpi, \varrho, \varsigma, \phi,$ 

#### Math Bold (\mathbf)

0, 1, 2, 3, 4, 5, 6, 7, 8, 9,

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,

A, B,  $\Gamma$ ,  $\Delta$ , E, Z, H,  $\Theta$ , I, K,  $\Lambda$ , M, N,  $\Xi$ , O,  $\Pi$ , P,  $\Sigma$ , T,  $\Upsilon$ ,  $\Phi$ , X,  $\Psi$ ,  $\Omega$ ,

#### Caligraphic (\mathcal)

 $\mathcal{A}, \mathcal{B}, \mathcal{C}, \mathcal{D}, \mathcal{E}, \mathcal{F}, \mathcal{G}, \mathcal{H}, \mathcal{I}, \mathcal{J}, \mathcal{K}, \mathcal{L}, \mathcal{M}, \mathcal{N}, \mathcal{O}, \mathcal{P}, \mathcal{Q}, \mathcal{R}, \mathcal{S}, \mathcal{T}, \mathcal{U}, \mathcal{V}, \mathcal{W}, \mathcal{X}, \mathcal{Y}, \mathcal{Z}, \mathcal{V}, \mathcal{V}$ 

### Script (\mathscr)

 $\mathcal{A}$ ,  $\mathcal{B}$ ,  $\mathcal{C}$ ,  $\mathcal{D}$ ,  $\mathcal{E}$ ,  $\mathcal{F}$ ,  $\mathcal{G}$ ,  $\mathcal{H}$ ,  $\mathcal{I}$ ,  $\mathcal{J}$ ,  $\mathcal{K}$ ,  $\mathcal{L}$ ,  $\mathcal{M}$ ,  $\mathcal{N}$ ,  $\mathcal{O}$ ,  $\mathcal{P}$ ,  $\mathcal{Q}$ ,  $\mathcal{R}$ ,  $\mathcal{F}$ ,  $\mathcal{T}$ ,  $\mathcal{U}$ ,  $\mathcal{V}$ ,  $\mathcal{W}$ ,  $\mathcal{X}$ ,  $\mathcal{Y}$ ,  $\mathcal{Z}$ ,

### Fraktur (\mathfrak)

 $\mathfrak{A}$ ,  $\mathfrak{B}$ ,  $\mathfrak{C}$ ,  $\mathfrak{D}$ ,  $\mathfrak{E}$ ,  $\mathfrak{F}$ ,  $\mathfrak{G}$ ,  $\mathfrak{H}$ ,  $\mathfrak{I}$ ,  $\mathfrak{H}$ ,  $\mathfrak{L}$ ,  $\mathfrak{M}$ ,  $\mathfrak{N}$ ,  $\mathfrak{D}$ ,  $\mathfrak{P}$ ,  $\mathfrak{Q}$ ,  $\mathfrak{R}$ ,  $\mathfrak{S}$ ,  $\mathfrak{T}$ ,  $\mathfrak{U}$ ,  $\mathfrak{V}$ ,  $\mathfrak{W}$ ,  $\mathfrak{X}$ ,  $\mathfrak{Y}$ ,  $\mathfrak{J}$ ,  $\mathfrak{a}$ ,  $\mathfrak{b}$ ,  $\mathfrak{c}$ ,  $\mathfrak{d}$ ,  $\mathfrak{e}$ ,  $\mathfrak{f}$ ,  $\mathfrak{g}$ ,  $\mathfrak{h}$ ,  $\mathfrak{i}$ ,  $\mathfrak{f}$ 

### Blackboard Bold (\mathbb)

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,

## 2 Character Sidebearings

#### Default

|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| + |a| + |a|

#### Math Roman (\mathrm)

$$\begin{split} |A| + |B| + |C| + |D| + |E| + |F| + |G| + |H| + |I| + |J| + |K| + |L| + |M| + \\ |N| + |O| + |P| + |Q| + |R| + |S| + |T| + |U| + |V| + |W| + |X| + |Y| + |Z| + \\ |a| + |b| + |c| + |d| + |e| + |f| + |g| + |h| + |i| + |j| + |k| + |I| + |m| + \\ |n| + |o| + |p| + |q| + |r| + |s| + |t| + |u| + |v| + |w| + |x| + |y| + |z| + \\ |A| + |B| + |\Gamma| + |\Delta| + |E| + |Z| + |H| + |\Theta| + |I| + |K| + |\Lambda| + |M| + \\ |N| + |\Xi| + |O| + |\Pi| + |P| + |\Sigma| + |T| + |Y| + |\Phi| + |X| + |\Psi| + |\Omega| + \\ \end{split}$$

#### Math Italic Bold (\mathbm)

 $|A| + |B| + |C| + |D| + |E| + |F| + |G| + |H| + |I| + |J| + |K| + |L| + |M| + |N| + |O| + |P| + |Q| + |R| + |S| + |T| + |U| + |V| + |W| + |X| + |Y| + |Z| + |\alpha| + |b| + |c| + |d| + |e| + |f| + |g| + |h| + |i| + |j| + |k| + |l| + |m| + |n| + |o| + |p| + |q| + |r| + |s| + |t| + |u| + |v| + |w| + |x| + |y| + |z| + |A| + |B| + |T| + |A| + |E| + |Z| + |H| + |\Theta| + |I| + |K| + |A| + |M| + |M| + |S| + |O| + |\Pi| + |P| + |S| + |T| + |Y| + |\Phi| + |X| + |\Psi| + |\Omega| + |\alpha| + |\beta| + |\gamma| + |\delta| + |c| + |\zeta| + |\eta| + |b| + |t| + |k| + |\lambda| + |\mu| + |v| + |E| + |o| + |\pi| + |\rho| + |\sigma| + |\tau| + |v| + |\phi| + |\chi| + |\psi| + |\omega| + |\varepsilon| + |\beta| + |\varpi| + |\varphi| + |\varphi| + |\varphi| + |\psi| + |\omega| + |\omega|$ 

#### Math Bold (\mathbf)

 $\begin{aligned} |A| + |B| + |C| + |D| + |E| + |F| + |G| + |H| + |I| + |J| + |K| + |L| + |M| + \\ |N| + |O| + |P| + |Q| + |R| + |S| + |T| + |U| + |V| + |W| + |X| + |Y| + |Z| + \\ |\alpha| + |b| + |c| + |d| + |e| + |f| + |g| + |h| + |i| + |j| + |k| + |I| + |m| + \\ |n| + |o| + |p| + |q| + |r| + |s| + |t| + |u| + |v| + |w| + |x| + |y| + |z| + \\ |A| + |B| + |\Gamma| + |\Delta| + |E| + |Z| + |H| + |\Theta| + |I| + |K| + |\Lambda| + |M| + \\ |N| + |\Xi| + |O| + |\Pi| + |P| + |\Sigma| + |T| + |\Upsilon| + |\Phi| + |X| + |\Psi| + |\Omega| + \end{aligned}$ 

#### Math Calligraphic (\mathcal)

 $|\mathcal{A}| + |\mathcal{B}| + |\mathcal{C}| + |\mathcal{D}| + |\mathcal{E}| + |\mathcal{F}| + |\mathcal{G}| + |\mathcal{H}| + |\mathcal{I}| + |\mathcal{I}| + |\mathcal{K}| + |\mathcal{L}| + |\mathcal{M}| + |\mathcal{N}| + |\mathcal{O}| + |\mathcal{P}| + |\mathcal{Q}| + |\mathcal{R}| + |\mathcal{S}| + |\mathcal{I}| + |\mathcal{U}| + |\mathcal{V}| + |\mathcal{W}| + |\mathcal{X}| + |\mathcal{Y}| + |\mathcal{Z}| + |\mathcal{Y}| + |$ 

## 3 Superscript positioning

Default

$$\begin{array}{l} A^2 + B^2 + C^2 + D^2 + E^2 + F^2 + G^2 + H^2 + I^2 + J^2 + K^2 + L^2 + M^2 + \\ N^2 + O^2 + P^2 + Q^2 + R^2 + S^2 + T^2 + U^2 + V^2 + W^2 + X^2 + Y^2 + Z^2 + \\ \alpha^2 + b^2 + c^2 + d^2 + e^2 + f^2 + g^2 + h^2 + i^2 + j^2 + k^2 + l^2 + m^2 + \\ n^2 + o^2 + p^2 + q^2 + r^2 + s^2 + t^2 + u^2 + v^2 + w^2 + x^2 + y^2 + z^2 + \\ A^2 + B^2 + \Gamma^2 + \Delta^2 + E^2 + Z^2 + H^2 + \Theta^2 + I^2 + K^2 + \Lambda^2 + M^2 + \\ N^2 + \Xi^2 + O^2 + \Pi^2 + P^2 + \Sigma^2 + T^2 + \Upsilon^2 + \Phi^2 + X^2 + \Psi^2 + \Omega^2 + \\ \alpha^2 + \beta^2 + \gamma^2 + \delta^2 + \epsilon^2 + \zeta^2 + \eta^2 + \theta^2 + \iota^2 + \kappa^2 + \lambda^2 + \mu^2 + \\ v^2 + \xi^2 + o^2 + \pi^2 + \rho^2 + \sigma^2 + \tau^2 + v^2 + \phi^2 + \chi^2 + \Psi^2 + \omega^2 + \\ \varepsilon^2 + \vartheta^2 + \varpi^2 + \varrho^2 + \varsigma^2 + \varphi^2 + \end{array}$$

Math Roman (\mathrm)

$$\begin{split} &A^2+B^2+C^2+D^2+E^2+F^2+G^2+H^2+I^2+J^2+K^2+L^2+M^2+\\ &N^2+O^2+P^2+Q^2+R^2+S^2+T^2+U^2+V^2+W^2+X^2+Y^2+Z^2+\\ &\alpha^2+b^2+c^2+d^2+e^2+f^2+g^2+h^2+i^2+j^2+k^2+I^2+m^2+\\ &n^2+o^2+p^2+q^2+r^2+s^2+t^2+u^2+v^2+w^2+x^2+y^2+z^2+\\ &A^2+B^2+\Gamma^2+\Delta^2+E^2+Z^2+H^2+\Theta^2+I^2+K^2+\Lambda^2+M^2+\\ &N^2+\Xi^2+O^2+\Pi^2+P^2+\Sigma^2+T^2+Y^2+\Phi^2+X^2+\Psi^2+\Omega^2+\\ \end{split}$$

Math Italic Bold (\mathbm)

Math Bold (\mathbf)

$$\begin{aligned} & \mathbf{A}^2 + \mathbf{B}^2 + \mathbf{C}^2 + \mathbf{D}^2 + \mathbf{E}^2 + \mathbf{F}^2 + \mathbf{G}^2 + \mathbf{H}^2 + \mathbf{I}^2 + \mathbf{J}^2 + \mathbf{K}^2 + \mathbf{L}^2 + \mathbf{M}^2 + \\ & \mathbf{N}^2 + \mathbf{O}^2 + \mathbf{P}^2 + \mathbf{Q}^2 + \mathbf{R}^2 + \mathbf{S}^2 + \mathbf{T}^2 + \mathbf{U}^2 + \mathbf{V}^2 + \mathbf{W}^2 + \mathbf{X}^2 + \mathbf{Y}^2 + \mathbf{Z}^2 + \\ & \mathbf{\alpha}^2 + \mathbf{b}^2 + \mathbf{c}^2 + \mathbf{d}^2 + \mathbf{e}^2 + \mathbf{f}^2 + \mathbf{g}^2 + \mathbf{h}^2 + \mathbf{i}^2 + \mathbf{j}^2 + \mathbf{k}^2 + \mathbf{I}^2 + \mathbf{m}^2 + \\ & \mathbf{n}^2 + \mathbf{o}^2 + \mathbf{p}^2 + \mathbf{q}^2 + \mathbf{r}^2 + \mathbf{s}^2 + \mathbf{t}^2 + \mathbf{u}^2 + \mathbf{v}^2 + \mathbf{w}^2 + \mathbf{x}^2 + \mathbf{y}^2 + \mathbf{z}^2 + \\ & \mathbf{A}^2 + \mathbf{B}^2 + \mathbf{\Gamma}^2 + \mathbf{\Delta}^2 + \mathbf{E}^2 + \mathbf{Z}^2 + \mathbf{H}^2 + \mathbf{\Theta}^2 + \mathbf{I}^2 + \mathbf{K}^2 + \mathbf{\Lambda}^2 + \mathbf{M}^2 + \\ & \mathbf{N}^2 + \mathbf{\Xi}^2 + \mathbf{O}^2 + \mathbf{\Pi}^2 + \mathbf{P}^2 + \mathbf{\Sigma}^2 + \mathbf{T}^2 + \mathbf{Y}^2 + \mathbf{\Phi}^2 + \mathbf{X}^2 + \mathbf{\Psi}^2 + \mathbf{\Omega}^2 + \end{aligned}$$

Math Calligraphic (\mathcal)

$$A^{2} + B^{2} + C^{2} + D^{2} + E^{2} + F^{2} + G^{2} + H^{2} + I^{2} + I^{2} + K^{2} + L^{2} + M^{2} + N^{2} + O^{2} + P^{2} + Q^{2} + R^{2} + S^{2} + T^{2} + U^{2} + V^{2} + W^{2} + X^{2} + V^{2} + Z^{2} + I^{2} + I^{2$$

## 4 Subscript positioning

Default

$$A_{i} + B_{i} + C_{i} + D_{i} + E_{i} + F_{i} + G_{i} + H_{i} + I_{i} + J_{i} + K_{i} + L_{i} + M_{i} + N_{i} + O_{i} + P_{i} + Q_{i} + R_{i} + S_{i} + T_{i} + U_{i} + V_{i} + W_{i} + X_{i} + Y_{i} + Z_{i} + \alpha_{i} + b_{i} + c_{i} + d_{i} + e_{i} + f_{i} + g_{i} + h_{i} + i_{i} + j_{i} + k_{i} + l_{i} + m_{i} + n_{i} + o_{i} + p_{i} + q_{i} + r_{i} + s_{i} + t_{i} + u_{i} + v_{i} + w_{i} + x_{i} + y_{i} + z_{i} + A_{i} + B_{i} + \Gamma_{i} + \Delta_{i} + E_{i} + Z_{i} + H_{i} + \Theta_{i} + I_{i} + K_{i} + \Lambda_{i} + M_{i} + N_{i} + \Xi_{i} + O_{i} + \Pi_{i} + P_{i} + \Sigma_{i} + T_{i} + Y_{i} + \Phi_{i} + X_{i} + \Psi_{i} + \Omega_{i} + \alpha_{i} + \beta_{i} + \gamma_{i} + \delta_{i} + \epsilon_{i} + \zeta_{i} + \eta_{i} + \theta_{i} + \iota_{i} + \kappa_{i} + \lambda_{i} + \mu_{i} + v_{i} + \xi_{i} + o_{i} + \pi_{i} + \rho_{i} + \sigma_{i} + \tau_{i} + v_{i} + \psi_{i} + \omega_{i} + \epsilon_{i} + \varphi_{i} + \varphi_{i$$

Math Roman (\mathrm)

$$\begin{aligned} & A_{i} + B_{i} + C_{i} + D_{i} + E_{i} + F_{i} + G_{i} + H_{i} + I_{i} + J_{i} + K_{i} + L_{i} + M_{i} + \\ & N_{i} + O_{i} + P_{i} + Q_{i} + R_{i} + S_{i} + T_{i} + U_{i} + V_{i} + W_{i} + X_{i} + Y_{i} + Z_{i} + \\ & \alpha_{i} + b_{i} + c_{i} + d_{i} + e_{i} + f_{i} + g_{i} + h_{i} + i_{i} + j_{i} + k_{i} + I_{i} + m_{i} + \\ & n_{i} + o_{i} + p_{i} + q_{i} + r_{i} + s_{i} + t_{i} + u_{i} + v_{i} + w_{i} + x_{i} + y_{i} + z_{i} + \\ & A_{i} + B_{i} + \Gamma_{i} + \Delta_{i} + E_{i} + Z_{i} + H_{i} + \Theta_{i} + I_{i} + K_{i} + \Lambda_{i} + M_{i} + \\ & N_{i} + \Xi_{i} + O_{i} + \Pi_{i} + P_{i} + \Sigma_{i} + T_{i} + Y_{i} + \Phi_{i} + X_{i} + \Psi_{i} + \Omega_{i} + \end{aligned}$$

Math Bold Italic (\mathbm)

$$\begin{aligned} \mathbf{A}_{i} + \mathbf{B}_{i} + \mathbf{C}_{i} + \mathbf{D}_{i} + \mathbf{E}_{i} + \mathbf{F}_{i} + \mathbf{G}_{i} + \mathbf{H}_{i} + \mathbf{I}_{i} + \mathbf{J}_{i} + \mathbf{K}_{i} + \mathbf{L}_{i} + \mathbf{M}_{i} + \mathbf{N}_{i} + \mathbf{O}_{i} + \mathbf{P}_{i} + \mathbf{Q}_{i} + \mathbf{R}_{i} + \mathbf{S}_{i} + \mathbf{T}_{i} + \mathbf{U}_{i} + \mathbf{V}_{i} + \mathbf{W}_{i} + \mathbf{X}_{i} + \mathbf{Y}_{i} + \mathbf{Z}_{i} + \mathbf{A}_{i} + \mathbf{D}_{i} + \mathbf{C}_{i} + \mathbf{d}_{i} + \mathbf{e}_{i} + \mathbf{f}_{i} + \mathbf{g}_{i} + \mathbf{h}_{i} + \mathbf{i}_{i} + \mathbf{j}_{i} + \mathbf{k}_{i} + \mathbf{I}_{i} + \mathbf{m}_{i} + \mathbf{n}_{i} + \mathbf{o}_{i} + \mathbf{p}_{i} + \mathbf{q}_{i} + \mathbf{r}_{i} + \mathbf{s}_{i} + \mathbf{t}_{i} + \mathbf{u}_{i} + \mathbf{v}_{i} + \mathbf{w}_{i} + \mathbf{x}_{i} + \mathbf{y}_{i} + \mathbf{z}_{i} + \mathbf{A}_{i} + \mathbf{B}_{i} + \mathbf{\Gamma}_{i} + \mathbf{\Delta}_{i} + \mathbf{E}_{i} + \mathbf{Z}_{i} + \mathbf{H}_{i} + \mathbf{\Theta}_{i} + \mathbf{I}_{i} + \mathbf{K}_{i} + \mathbf{\Lambda}_{i} + \mathbf{M}_{i} + \mathbf{N}_{i} + \mathbf{E}_{i} + \mathbf{D}_{i} + \mathbf{E}_{i} + \mathbf{T}_{i} + \mathbf{Y}_{i} + \mathbf{\Phi}_{i} + \mathbf{X}_{i} + \mathbf{\Psi}_{i} + \mathbf{\Omega}_{i} + \mathbf{\Omega}_{i} + \mathbf{\Omega}_{i} + \mathbf{\Omega}_{i} + \mathbf{\Omega}_{i} + \mathbf{D}_{i} + \mathbf{D}_{i$$

Math Bold (\mathbf)

$$\begin{aligned} & \mathbf{A}_{i} + \mathbf{B}_{i} + \mathbf{C}_{i} + \mathbf{D}_{i} + \mathbf{E}_{i} + \mathbf{F}_{i} + \mathbf{G}_{i} + \mathbf{H}_{i} + \mathbf{I}_{i} + \mathbf{J}_{i} + \mathbf{K}_{i} + \mathbf{L}_{i} + \mathbf{M}_{i} + \\ & \mathbf{N}_{i} + \mathbf{O}_{i} + \mathbf{P}_{i} + \mathbf{Q}_{i} + \mathbf{R}_{i} + \mathbf{S}_{i} + \mathbf{T}_{i} + \mathbf{U}_{i} + \mathbf{V}_{i} + \mathbf{W}_{i} + \mathbf{X}_{i} + \mathbf{Y}_{i} + \mathbf{Z}_{i} + \\ & \mathbf{\alpha}_{i} + \mathbf{b}_{i} + \mathbf{c}_{i} + \mathbf{d}_{i} + \mathbf{e}_{i} + \mathbf{f}_{i} + \mathbf{g}_{i} + \mathbf{h}_{i} + \mathbf{i}_{i} + \mathbf{j}_{i} + \mathbf{k}_{i} + \mathbf{I}_{i} + \mathbf{m}_{i} + \\ & \mathbf{n}_{i} + \mathbf{o}_{i} + \mathbf{p}_{i} + \mathbf{q}_{i} + \mathbf{r}_{i} + \mathbf{s}_{i} + \mathbf{t}_{i} + \mathbf{u}_{i} + \mathbf{v}_{i} + \mathbf{w}_{i} + \mathbf{x}_{i} + \mathbf{y}_{i} + \mathbf{z}_{i} + \\ & \mathbf{A}_{i} + \mathbf{B}_{i} + \mathbf{\Gamma}_{i} + \mathbf{\Delta}_{i} + \mathbf{E}_{i} + \mathbf{Z}_{i} + \mathbf{H}_{i} + \mathbf{\Theta}_{i} + \mathbf{I}_{i} + \mathbf{K}_{i} + \mathbf{\Lambda}_{i} + \mathbf{M}_{i} + \\ & \mathbf{N}_{i} + \mathbf{\Xi}_{i} + \mathbf{O}_{i} + \mathbf{\Pi}_{i} + \mathbf{P}_{i} + \mathbf{\Sigma}_{i} + \mathbf{T}_{i} + \mathbf{Y}_{i} + \mathbf{\Phi}_{i} + \mathbf{X}_{i} + \mathbf{\Psi}_{i} + \mathbf{\Omega}_{i} + \end{aligned}$$

Math Calligraphic (\mathcal)

$$\mathcal{A}_i + \mathcal{B}_i + \mathcal{C}_i + \mathcal{D}_i + \mathcal{E}_i + \mathcal{F}_i + \mathcal{G}_i + \mathcal{H}_i + \mathcal{I}_i + \mathcal{J}_i + \mathcal{K}_i + \mathcal{L}_i + \mathcal{M}_i + \mathcal{N}_i + \mathcal{O}_i + \mathcal{P}_i + \mathcal{Q}_i + \mathcal{R}_i + \mathcal{S}_i + \mathcal{T}_i + \mathcal{U}_i + \mathcal{V}_i + \mathcal{W}_i + \mathcal{X}_i + \mathcal{Y}_i + \mathcal{Z}_i + \mathcal$$

## 5 Accent positioning

```
Default
                                                                                                                                                                                                                               \hat{0} + \hat{1} + \hat{2} + \hat{3} + \hat{4} + \hat{5} + \hat{6} + \hat{7} + \hat{8} + \hat{9} + \hat{9}
                                                                                                                                                                                                                          \hat{A} + \hat{B} + \hat{C} + \hat{D} + \hat{E} + \hat{E} + \hat{G} + \hat{H} + \hat{I} + \hat{I} + \hat{K} + \hat{L} + \hat{M} + \hat{C} + 
                                                                                                                                                                                                                               \hat{N} + \hat{O} + \hat{P} + \hat{O} + \hat{R} + \hat{S} + \hat{T} + \hat{U} + \hat{V} + \hat{W} + \hat{X} + \hat{Y} + \hat{Z} + \hat{C}
                                                                                                                                                                                                                               \hat{a} + \hat{b} + \hat{c} + \hat{d} + \hat{e} + \hat{f} + \hat{a} + \hat{h} + \hat{i} + \hat{i} + \hat{k} + \hat{l} + \hat{m} + \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{v} + 
                                                                                                                                                                                                                          \hat{A} + \hat{B} + \hat{\Gamma} + \hat{\Delta} + \hat{E} + \hat{Z} + \hat{H} + \hat{\Theta} + \hat{I} + \hat{K} + \hat{\Lambda} + \hat{M} + 
                                                                                                                                                                                                                          \hat{N} + \hat{\Xi} + \hat{O} + \hat{\Pi} + \hat{P} + \hat{\Sigma} + \hat{T} + \hat{Y} + \hat{\Phi} + \hat{X} + \hat{\Psi} + \hat{\Omega} + \hat{\Pi} + 
                                                                                                                                                                                                                               \hat{\alpha} + \hat{\beta} + \hat{\gamma} + \hat{\delta} + \hat{\epsilon} + \hat{\zeta} + \hat{\eta} + \hat{\theta} + \hat{\iota} + \hat{\kappa} + \hat{\lambda} + \hat{\mu} + \hat{\kappa} + 
                                                                                                                                                                                                                               \hat{v} + \hat{\xi} + \hat{o} + \hat{\pi} + \hat{\rho} + \hat{\sigma} + \hat{\tau} + \hat{v} + \hat{\phi} + \hat{\chi} + \hat{\psi} + \hat{\omega} + \hat{\sigma}
                                                                                                                                                                                                                          \hat{\varepsilon} + \hat{\vartheta} + \hat{\varpi} + \hat{\varrho} + \hat{\varsigma} + \hat{\varrho} +
Math Italic (\mathit)
                                                                                                                                                                                                                          \hat{0} + \hat{1} + \hat{2} + \hat{3} + \hat{4} + \hat{5} + \hat{6} + \hat{7} + \hat{8} + \hat{9} + \hat{9}
                                                                                                                                                                                                                          \hat{A} + \hat{B} + \hat{C} + \hat{D} + \hat{E} + \hat{E} + \hat{G} + \hat{H} + \hat{I} + \hat{I} + \hat{K} + \hat{L} + \hat{M} + \hat{C} + 
                                                                                                                                                                                                                               \hat{N} + \hat{O} + \hat{P} + \hat{O} + \hat{R} + \hat{S} + \hat{T} + \hat{U} + \hat{V} + \hat{W} + \hat{X} + \hat{Y} + \hat{Z} + \hat{C}
                                                                                                                                                                                                                               \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{l} + \hat{p} + \hat{i} + \hat{j} + \tilde{i}
                                                                                                                                                                                                                          \hat{n} + \hat{o} + \hat{p} + \hat{q} + \hat{r} + \hat{s} + \hat{t} + \hat{u} + \hat{v} + \hat{w} + \hat{x} + \hat{v} + \hat{z} + \hat{z}
                                                                                                                                                                                                                          \hat{A} + \hat{B} + \hat{\Gamma} + \hat{\Delta} + \hat{E} + \hat{Z} + \hat{H} + \hat{\Theta} + \hat{I} + \hat{K} + \hat{\Lambda} + \hat{M} + 
                                                                                                                                                                                                                          \hat{N} + \hat{\Xi} + \hat{O} + \hat{\Pi} + \hat{P} + \hat{\Sigma} + \hat{T} + \hat{Y} + \hat{\Phi} + \hat{X} + \hat{\Psi} + \hat{\Omega} + \hat{\Pi} + 
                                                                                                                                                                                                                               \hat{\alpha} + \hat{\beta} + \hat{\gamma} + \hat{\delta} + \hat{\epsilon} + \hat{\zeta} + \hat{\eta} + \hat{\theta} + \hat{\iota} + \hat{\kappa} + \hat{\lambda} + \hat{\mu} + \hat{\kappa} + 
                                                                                                                                                                                                                               \hat{\mathcal{V}} + \hat{\mathcal{E}} + \hat{\mathcal{O}} + \hat{\pi} + \hat{\mathcal{O}} + \hat{\mathcal{O}} + \hat{\mathcal{C}} + \hat{\mathcal{C}}
                                                                                                                                                                                                                          \hat{\varepsilon} + \hat{\vartheta} + \hat{\varpi} + \hat{\rho} + \hat{\varsigma} + \hat{\varphi} +
Math Roman (\mathrm)
                                                                                                                                                                                                                               \hat{0} + \hat{1} + \hat{2} + \hat{3} + \hat{4} + \hat{5} + \hat{6} + \hat{7} + \hat{8} + \hat{9} + \hat{9}
                                                                                                                                                                                                                               \hat{A} + \hat{B} + \hat{C} + \hat{D} + \hat{E} + \hat{F} + \hat{G} + \hat{H} + \hat{I} + \hat{I} + \hat{K} + \hat{L} + \hat{M} + \hat{I} + 
                                                                                                                                                                                                                                     \hat{N} + \hat{O} + \hat{P} + \hat{O} + \hat{R} + \hat{S} + \hat{T} + \hat{U} + \hat{V} + \hat{W} + \hat{X} + \hat{Y} + \hat{Z} + \hat{C}
                                                                                                                                                                                                                                     \hat{a} + \hat{b} + \hat{c} + \hat{d} + \hat{e} + \hat{f} + \hat{g} + \hat{h} + \hat{i} + \hat{i} + \hat{k} + \hat{i} + \hat{m} + \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{v} + 
                                                                                                                                                                                                                               \hat{A} + \hat{B} + \hat{\Gamma} + \hat{\Delta} + \hat{E} + \hat{Z} + \hat{H} + \hat{\Theta} + \hat{I} + \hat{K} + \hat{\Lambda} + \hat{M} + \hat{A} + 
                                                                                                                                                                                                                               \hat{N} + \hat{\Xi} + \hat{O} + \hat{\Pi} + \hat{P} + \hat{\Sigma} + \hat{T} + \hat{Y} + \hat{\Phi} + \hat{X} + \hat{\Psi} + \hat{\Omega} + \hat{\Pi} + 
Math Italic Bold (\mathbm)
                                                                                                                                                                                                                          \hat{0} + \hat{1} + \hat{2} + \hat{3} + \hat{4} + \hat{5} + \hat{6} + \hat{7} + \hat{8} + \hat{9} + \hat{9}
                                                                                                                                                                                                                          \hat{A} + \hat{B} + \hat{C} + \hat{D} + \hat{E} + \hat{F} + \hat{G} + \hat{H} + \hat{I} + \hat{I} + \hat{K} + \hat{L} + \hat{M} + \hat{C} + 
                                                                                                                                                                                                                          \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{q} + \hat{h} + \hat{i} + \hat{i} + \hat{k} + \hat{l} + \hat{m} + \hat{d} + 
                                                                                                                                                                                                                               \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{z}
                                                                                                                                                                                                                          \hat{A} + \hat{B} + \hat{\Gamma} + \hat{\Delta} + \hat{E} + \hat{Z} + \hat{H} + \hat{\Theta} + \hat{I} + \hat{K} + \hat{\Lambda} + \hat{M} + \hat{A} + 
                                                                                                                                                                                                                          \hat{N} + \hat{\Xi} + \hat{O} + \hat{\Pi} + \hat{P} + \hat{\Sigma} + \hat{T} + \hat{Y} + \hat{\Phi} + \hat{X} + \hat{\Psi} + \hat{\Omega} + \hat{Q} + 
                                                                                                                                                                                                                               \hat{\alpha} + \hat{\beta} + \hat{\gamma} + \hat{\delta} + \hat{\epsilon} + \hat{\zeta} + \hat{\eta} + \hat{\theta} + \hat{\iota} + \hat{\kappa} + \hat{\lambda} + \hat{\mu} + \hat{\mu}
                                                                                                                                                                                                                               \hat{\mathcal{V}} + \hat{\mathcal{E}} + \hat{\boldsymbol{o}} + \hat{\boldsymbol{\pi}} + \hat{\boldsymbol{\rho}} + \hat{\boldsymbol{\sigma}} + \hat{\boldsymbol{\tau}} + \hat{\boldsymbol{\upsilon}} + \hat{\boldsymbol{\phi}} + \hat{\boldsymbol{\chi}} + \hat{\boldsymbol{\psi}} + \hat{\boldsymbol{\omega}} + \hat{\boldsymbol{\omega}}
                                                                                                                                                                                                                          \hat{\varepsilon} + \hat{\vartheta} + \hat{\varpi} + \hat{\rho} + \hat{c} + \hat{\theta} +
```

#### Math Bold (\mathbf)

$$\begin{split} \hat{0} + \hat{1} + \hat{2} + \hat{3} + \hat{4} + \hat{5} + \hat{6} + \hat{7} + \hat{8} + \hat{9} + \\ \hat{A} + \hat{B} + \hat{C} + \hat{D} + \hat{E} + \hat{F} + \hat{G} + \hat{H} + \hat{I} + \hat{J} + \hat{K} + \hat{L} + \hat{M} + \\ \hat{N} + \hat{O} + \hat{P} + \hat{Q} + \hat{R} + \hat{S} + \hat{T} + \hat{U} + \hat{V} + \hat{W} + \hat{X} + \hat{Y} + \hat{Z} + \\ \hat{\alpha} + \hat{b} + \hat{c} + \hat{d} + \hat{e} + \hat{f} + \hat{g} + \hat{h} + \hat{I} + \hat{J} + \hat{K} + \hat{I} + \hat{m} + \\ \hat{n} + \hat{o} + \hat{p} + \hat{q} + \hat{r} + \hat{s} + \hat{t} + \hat{u} + \hat{v} + \hat{w} + \hat{x} + \hat{y} + \hat{z} + \\ \hat{A} + \hat{B} + \hat{\Gamma} + \hat{\Delta} + \hat{E} + \hat{Z} + \hat{H} + \hat{\Theta} + \hat{I} + \hat{K} + \hat{\Lambda} + \hat{M} + \\ \hat{N} + \hat{\Xi} + \hat{O} + \hat{\Pi} + \hat{P} + \hat{\Sigma} + \hat{T} + \hat{Y} + \hat{\Phi} + \hat{X} + \hat{\Psi} + \hat{\Omega} + \end{split}$$

### Math Calligraphic (\mathcal)

$$\hat{A} + \hat{B} + \hat{C} + \hat{D} + \hat{E} + \hat{F} + \hat{G} + \hat{H} + \hat{I} + \hat{J} + \hat{K} + \hat{L} + \hat{M} +$$

$$\hat{N} + \hat{O} + \hat{P} + \hat{Q} + \hat{R} + \hat{S} + \hat{T} + \hat{U} + \hat{V} + \hat{W} + \hat{X} + \hat{Y} + \hat{Z} +$$

## 6 Differentials

```
\begin{split} \partial A + \partial B + \partial C + \partial D + \partial E + \partial F + \partial G + \partial H + \partial I + \partial J + \partial K + \partial L + \partial M + \partial N + \partial O + \partial P + \partial Q + \partial R + \partial S + \partial T + \partial U + \partial V + \partial W + \partial X + \partial Y + \partial Z + \partial \alpha + \partial b + \partial c + \partial d + \partial e + \partial f + \partial g + \partial h + \partial i + \partial j + \partial k + \partial l + \partial m + \partial n + \partial o + \partial p + \partial q + \partial r + \partial s + \partial t + \partial u + \partial v + \partial w + \partial x + \partial y + \partial z + \partial A + \partial B + \partial \Gamma + \partial \Delta + \partial E + \partial Z + \partial H + \partial \Theta + \partial I + \partial K + \partial \Lambda + \partial M + \partial N + \partial \Xi + \partial O + \partial \Pi + \partial P + \partial \Sigma + \partial T + \partial Y + \partial \Phi + \partial X + \partial \Psi + \partial \Omega + \partial \Omega + \partial G + \partial
```

# 7 Slash kerning

```
 1/A + 1/B + 1/C + 1/D + 1/E + 1/F + 1/G + 1/H + 1/I + 1/I + 1/K + 1/L + 1/M + 1/N + 1/O + 1/P + 1/Q + 1/R + 1/S + 1/T + 1/U + 1/V + 1/W + 1/X + 1/Y + 1/Z + 1/a + 1/b + 1/c + 1/d + 1/e + 1/f + 1/g + 1/h + 1/i + 1/j + 1/k + 1/l + 1/m + 1/n + 1/o + 1/p + 1/q + 1/r + 1/s + 1/t + 1/u + 1/v + 1/w + 1/x + 1/y + 1/z + 1/A + 1/B + 1/\Gamma + 1/\Delta + 1/E + 1/Z + 1/H + 1/O + 1/I + 1/K + 1/\Lambda + 1/M + 1/N + 1/\Xi + 1/O + 1/\Pi + 1/P + 1/\Sigma + 1/T + 1/\Upsilon + 1/\Phi + 1/X + 1/\Psi + 1/\Omega + 1/\alpha + 1/\beta + 1/\gamma + 1/\delta + 1/\epsilon + 1/\zeta + 1/\eta + 1/\theta + 1/\iota + 1/\kappa + 1/\lambda + 1/\mu + 1/\nu + 1/\xi + 1/o + 1/\pi + 1/\rho + 1/\sigma + 1/\tau + 1/\nu + 1/\psi + 1/\psi + 1/\omega + 1/\rho + 1/\omega + 1/\rho + 1/\rho
```

```
A/2 + B/2 + C/2 + D/2 + E/2 + F/2 + G/2 + H/2 + I/2 + J/2 + K/2 + L/2 + M/2 + N/2 + O/2 + P/2 + Q/2 + R/2 + S/2 + T/2 + U/2 + V/2 + W/2 + X/2 + Y/2 + Z/2 + a/2 + b/2 + c/2 + d/2 + e/2 + f/2 + g/2 + h/2 + i/2 + j/2 + k/2 + U/2 + m/2 + n/2 + o/2 + p/2 + q/2 + r/2 + s/2 + t/2 + u/2 + v/2 + w/2 + x/2 + y/2 + z/2 + A/2 + B/2 + \Gamma/2 + \Delta/2 + E/2 + Z/2 + H/2 + \Theta/2 + I/2 + K/2 + \Lambda/2 + M/2 + N/2 + E/2 + O/2 + \Pi/2 + E/2 + Z/2 + T/2 + \Pi/2 +
```

# 8 Big operators

$$\sum_{i=1}^{n} x^{n} \prod_{i=1}^{n} x^{n} \prod_{i=1}^{n} x^{n} \int_{i=1}^{n} x^{n} \oint_{i=1}^{n} x^{n}$$

$$\bigotimes_{i=1}^{n} x^{n} \bigoplus_{i=1}^{n} x^{n} \bigcup_{i=1}^{n} x^{n} \bigvee_{i=1}^{n} x^{n} \bigoplus_{i=1}^{n} x^{n} \bigcup_{i=1}^{n} x^{n} \bigcup_{i=1}^{n} x^{n} \bigcup_{i=1}^{n} x^{n}$$

## 9 Radicals

$$\sqrt{x+y}$$
  $\sqrt{x^2+y^2}$   $\sqrt{x_i^2+y_j^2}$   $\sqrt{\left(\frac{\cos x}{2}\right)}$   $\sqrt{\left(\frac{\sin x}{2}\right)}$ 

$$\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{x}+y}}}}$$

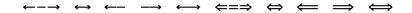
## 10 Over- and underbraces

$$\widehat{x}$$
  $\widehat{x+y}$   $\widehat{x^2+y^2}$   $\widehat{x_i^2+y_j^2}$   $\underbrace{x}$   $\underbrace{x+y}$   $\underbrace{x_i+y_j}$   $\underbrace{x_i^2+y_j^2}$ 

## 11 Normal and wide accents

$$\dot{x} \ \ddot{x} \ \ddot{x} \ \overline{x} \ \overline{x} \ \overline{x} \ \widetilde{x} \ \widetilde{x} \ \widetilde{x} \ \widetilde{x} \ \widetilde{x} \ \widetilde{x} \ \widehat{x} \$$

# 12 Long arrows



# 13 Left and right delimters

$$-(f)--[f]--[f]--[f]--\langle f\rangle--\{f\}-$$

Using \left and \right.

$$-(f) - -[f] - -|f| - -|f| - -|f| - -|f|$$

$$-)f(--]f[--/f/--\backslash f\backslash --/f\backslash --\backslash f/-$$

# 14 Big-g-g delimters

# 15 Binary Operators

```
\pm
                        X \cap V
                                                    X \diamond V
                                                              \diamond
                                                                                           X \oplus V
                                                                                                      \oplus
x \pm y
                                  \cap
          \mp
                                                    x \Delta y
                                                              \bigtriangleup
                                                                                                      \ominus
X \mp y
                        X \cup Y
                                  \cup
                                                                                           X \ominus Y
x \times y
          \times
                        x \uplus y
                                  \uplus
                                                    X \nabla y
                                                              \bigtriangledown
                                                                                           X \otimes Y
                                                                                                      \otimes
                                                              \triangleleft
x \div y
          \div
                                                                                           X \oslash Y
                                                                                                      \oslash
                        X \sqcap y
                                  \sqcap
                                                    X \triangleleft y
                                                              \triangleright
x * y
         \ast
                        X \sqcup y
                                  \sqcup
                                                    X \triangleright y
                                                                                           x \odot y
                                                                                                      \odot
          \star
                        X \vee y
                                  \vee
                                                    X \triangleleft y
                                                              \lhd
                                                                                           x()y
                                                                                                      \bigcirc
X \star y
                                                              \rhd
                                                                                                      \dagger
x \circ y
          \circ
                        X \wedge Y
                                  \wedge
                                                    X \triangleright Y
                                                                                           x \dagger y
          \bullet
                        X \setminus Y
                                  \setminus
                                                              \unlhd
                                                                                           x \ddagger y
                                                                                                      \ddagger
X \bullet Y
                                                   X \triangleleft Y
x \cdot y
          \cdot
                        x≀y
                                  \wr
                                                    x \trianglerighteq y
                                                              \unrhd
                                                                                           x§y
                                                                                                      \S
                                                                                                      \P
x + y
                        x - y
                                                    X \coprod Y
                                                              \amalq
                                                                                           x¶y
```

## 16 Relations

```
x \leq y
          \lea
                             x \ge y
                                        \geq
                                                           x \equiv v
                                                                     \equiv
                                                                                   x \models y
                                                                                             \models
X \prec V
          \prec
                              x \succ y
                                        \succ
                                                            x \sim y
                                                                     \sim
                                                                                   x \perp y
                                                                                             \perp
x \preceq y
          \preceq
                             x \succeq y
                                        \succeq
                                                           x \simeq y
                                                                     \simeq
                                                                                   x \mid y
                                                                                             \mid
X \ll y
          \ll
                              x \gg y
                                                            x \simeq y
                                                                     \asymp
                                                                                   x \parallel y
                                                                                             \parallel
                                        \gg
          \subset
X \subset Y
                                        \supset
                                                           x \approx y
                                                                     \approx
                                                                                             \bowtie
                              X\supset Y
                                                                                   X\bowtie Y
                                                           x \cong y
x \subseteq y
          \subseteq
                              x \supseteq y
                                        \supseteq
                                                                     \conq
                                                                                   X \bowtie Y
                                                                                             \Join
X \sqsubset Y
          \sqsubset
                              X \supset Y
                                        \sqsupset
                                                           x \neq y
                                                                     \neq
                                                                                   x \smile y
                                                                                             \smile
x \sqsubseteq y
          \sqsubseteq
                             x \supseteq y
                                        \sqsupseteq
                                                           x \doteq v
                                                                     \dotea
                                                                                   x \sim y
                                                                                             \frown
x \in y
          \in
                                        \ni
                                                                     \propto
                                                            \chi \propto \gamma
                              X \ni Y
                                                                                   x = y
                                                           x < y
x \vdash y
          \vdash
                              x \dashv y
                                        \dashv
                                                                     <
                                                                                   x > v
x:y
```

## 17 Punctuation

```
x,y , x;y ; x:y \colon x.y \ldotp x\cdot y \cdotp
```

## 18 Arrows

```
\longleftarrow
           \leftarrow
                                          x \leftarrow -y
                                                                                       x \uparrow y
                                                                                                  \uparrow
X \leftarrow V
           \Leftarrow
                                                       \Longleftarrow
x \leftarrow y
                                          x \longleftarrow v
                                                                                       x \uparrow y
                                                                                                  \Uparrow
X \rightarrow Y
           \rightarrow
                                          x \longrightarrow y
                                                       \longrightarrow
                                                                                       x \downarrow y
                                                                                                  \downarrow
                                          x \Longrightarrow y
                                                       \Longrightarrow
x \Rightarrow y
           \Rightarrow
                                                                                       x \downarrow y
                                                                                                  \Downarrow
                                                                                                  \updownarrow
X \longleftrightarrow Y
          \leftrightarrow
                                          x \longleftrightarrow y
                                                      \longleftrightarrow
                                                                                       x \downarrow y
                                                       \Longleftrightarrow
x \Leftrightarrow y
           \Leftrightarrow
                                          x \iff y
                                                                                       x \, \mathbf{l} \, \mathbf{v}
                                                                                                  \Updownarrow
                                          x \mapsto y
                                                       \longmapsto
                                                                                       x / y
                                                                                                  \nearrow
x \mapsto y
           \mapsto
x \leftarrow y
           \hookleftarrow
                                          x \hookrightarrow y
                                                       \hookrightarrow
                                                                                       X \setminus y
                                                                                                  \searrow
           \leftharpoonup
                                                       \rightharpoonup
                                                                                                  \swarrow
x ← y
                                          x \rightarrow y
                                                                                       x \not y
x \leftarrow y
                                                                                       x \ y
                                                                                                  \nwarrow
           \leftharpoondown
                                          x \rightarrow y
                                                       \rightharpoondown
          \rightleftharpoons
                                         x \leadsto y
                                                      \leadsto
X \leftrightharpoons y
```

# 19 Miscellaneous Symbols

<i>xy</i>	\ldots	$x \cdots y$	\cdots	x: $y$	\vdots	$x \cdot \cdot y$	\ddots
$x \aleph y$	\aleph	x/y	\prime	$x \forall y$	\forall	$\chi \infty y$	\infty
хћу	\hbar	хØу	\emptyset	$x\exists y$	\exists	$x\Box y$	\Box
χιy	\imath	<i>x</i> ∇ <i>y</i>	\nabla	$x \neg y$	\neg	$x \Diamond y$	\Diamond
xjy	∖jmath	x√y	\surd	x♭y	\flat	$x\Delta y$	\triangle
$x \ell y$	\ell	xTy	\top	X  mathred  Y	\natural	<b>x♣</b> y	\clubsuit
хүру	\wp	$x \perp y$	\bot	<i>x</i> # <i>y</i>	\sharp	$x \diamond y$	\diamondsuit
$x\Re y$	\Re	x  y	\	$x \setminus y$	\backslash	x♡y	\heartsuit
хЗу	\Im	x∠y	\angle	x∂y	\partial	x♠y	\spadesuit
$x \nabla y$	\mho	x.y		x y	1	x!y	!

# 20 Variable-sized Operators

```
x \sum y
                     x \cap y \bigcap
       \sum
                                            x \odot y \bigodot
x \prod y \setminus prod
                     x \mid y \setminus bigcup
                                            x \otimes y \bigotimes
x \coprod y \coprod x \coprod y \bigsqcup x \oplus y \bigoplus
                                            x + y
                                                     \biguplus
x \mid y
        \int
                     x \lor y \setminus bigvee
x \neq y
        \oint
                     x \wedge y \bigwedge
```

# 21 Log-like Operators

```
x arccos y x cos y
                        X CSC Y
                                  x exp y
                                             x ker y
                                                         x \lim \sup y \quad x \min y
                                                                                 x sinh y
x arcsin y
             x \cosh y \quad x \deg y \quad x \gcd y
                                             x \log y
                                                         x \ln y
                                                                       x Pr y
                                                                                 x sup y
xarctany xcoty
                        x det v
                                  xhomy xlimy
                                                         x \log y
                                                                       x sec v
                                                                                 x tan y
             x \coth y \quad x \dim y \quad x \inf y
                                             x \lim \inf y \quad x \max y
x \arg y
                                                                       x sin y
                                                                                 x tanh y
```

## 22 Delimiters

```
x)y
                                                             x \uparrow y
x(y)
                                   x \uparrow y
                                           \uparrow
                                                                    \Uparrow
x[y]
      [
                 x]y
                       ]
                                   x \downarrow y
                                           \downarrow
                                                             x \downarrow y
                                                                    \Downarrow
                 x\}y \setminus 
x\{y
     \{
                                   x ‡ y \updownarrow x $ y
                                                                    \Updownarrow
      \lfloor
                 x \rfloor y
                       \rfloor x[y
                                           \lceil
                                                             x]y
                                                                     \rceil
x|y
                                                                     \backslash
x(y)
      \langle
                 x\rangle y
                        \rangle x/y
                                                             x \setminus y
x|y
                 x||y
                        \mathbf{I}
```

# 23 Large Delimiters

```
\rmoustache \ \rmoustache \rmoustache \ \rmoustache \rmoustache \ \rmoustache \rmoustache \ \rmoustache \rmoustache \rmoustache \ \rmoustache \rmoustache \rmoustache \rmoustache \rmoustache \rmoustache \rmoustache \rmoustache \ \rmoustache \rmoustache \rmoustache
```

## 24 Math Mode Accents

```
\hat{a} \rightarrow \hat{a} \rightarrow
```

# 25 Miscellaneous Constructions

abc abc abc	<pre>\widetilde{abc} \overleftarrow{abc} \overline{abc}</pre>	abc abc abc	<pre>\widehat{abc} \overrightarrow{abc} \underline{abc}</pre>
abc	\overtine{abc} \overtrace{abc}	<u>abc</u>	\undertine{abc}
√abc f'	\sqrt{abc} f'	√abc abc xyz	\sqrt[n]{abc} \frac{abc}{xyz}

## 26 AMS Delimiters

 $x^{-}y$  \ulcorner  $x^{-}y$  \urcorner  $x_{\perp}y$  \llcorner  $x_{\perp}y$  \lrcorner

## 27 AMS Arrows

<i>x y</i>	\dashrightarrow	x y	\dashleftarrow
x = y	\leftleftarrows	$x \leftrightarrows y$	\leftrightarrows
$x \in y$	\Lleftarrow	<i>x</i>	\twoheadleftarrow
$x \leftarrow y$	\leftarrowtail	$X \notin Y$	\looparrowleft
$x \rightleftharpoons y$	\leftrightharpoons	$X \cap Y$	\curvearrowleft
$x \circ y$	\circlearrowleft	<i>x</i> † <i>y</i>	\Lsh
$x \uparrow \uparrow y$	\upuparrows	x	\upharpoonleft
$x \downarrow y$	\downharpoonleft	$x \rightarrow y$	\multimap
x ↔ y	\leftrightsquigarrow	$x \rightrightarrows y$	\rightrightarrows
$x \rightleftarrows y$	\rightleftarrows	$x \rightrightarrows y$	\rightrightarrows
$x \rightleftarrows y$	\rightleftarrows	$x \rightarrow y$	\twoheadrightarrow
$x \mapsto y$	\rightarrowtail	$x \rightarrow y$	\looparrowright
$x \leftrightharpoons y$	\rightleftharpoons	$X \cap Y$	\curvearrowright
$x \circ y$	\circlearrowright	x  ightharpoonup y	\Rsh
$x \downarrow \!\!\downarrow y$	\downdownarrows	$x \upharpoonright y$	\upharpoonright
$x \downarrow y$	\downharpoonright	x ⊶ y	\rightsquigarrow

# 28 AMS Negated Arrows

```
x \nleftrightarrow y \nleftarrow x \nleftrightarrow y \nrightarrow x \nleftrightarrow y \nRightarrow x \nleftrightarrow y \nleftrightarrow x \nleftrightarrow y \nLeftrightarrow
```

## 29 AMS Greek

 $x \in Y$  \digamma  $x \in Y$  \varkappa

## 30 AMS Hebrew

# 31 AMS Miscellaneous

хћу	\hbar	хћу	\hslash	
$X \Delta y$	\vartriangle	$x \nabla y$	\triangledown	
$x\Box y$	\square	$x \Diamond y$	\lozenge	
хy	\circledS	x∠y	\angle	
x∡y	\measuredangle	x∄y	\nexists	
х℧у	\mho	$x \exists y$	\Finv <sup>u</sup>	
хอу	\Game <sup>u</sup>	x k y	\Bbbk <sup>u</sup>	
<i>x</i> \ <i>y</i>	\backprime	хØу	\varnothing	
$X \blacktriangle Y$	\blacktriangle	x▼y	\blacktriangledown	
x∎y	\blacksquare	x∳y	\blacklozenge	
$x \star y$	\bigstar	x∢y	\sphericalangle	
xC $y$	\complement	хðу	\eth	
x/y	\diagup <sup>u</sup>	$x \setminus y$	\diagdown <sup>u</sup>	
$^{u}$ Not defined in amssymb.sty, define using the \newsymbol command.				

# 32 AMS Binary Operators

$x \dotplus y$	\dotplus	$X \setminus Y$	\smallsetminus
$x \cap y$	\Cap	$x \cup y$	\Cup
$x \overline{\wedge} y$	\barwedge	<i>x</i> ⊻ <i>y</i>	\veebar
<i>x</i>	\doublebarwedge	$x \boxminus y$	\boxminus
$X \boxtimes y$	\boxtimes	$X \square y$	\boxdot
$x \boxplus y$	\boxplus	x * y	\divideontimes
$x \ltimes y$	\ltimes	$x \rtimes y$	\rtimes
$x \lambda y$	\leftthreetimes	$x \wedge y$	\rightthreetimes
$x \downarrow y$	\curlywedge	$X \Upsilon y$	\curlyvee
$X \ominus Y$	\circleddash	<i>x</i> ⊗ <i>y</i>	\circledast
$X \odot Y$	\circledcirc	$x \cdot y$	\centerdot
ХŢУ	\intercal	-	

### 33 AMS Relations

```
x \leq y
         \legg
                                        x \leq y
                                                  \legslant
X \leqslant y
         \eqslantless
                                        x \lesssim y
                                                  \lesssim
x \lessapprox y
         \lessapprox
                                        x \approx y
                                                  \approxeq
         \lessdot
X \lessdot Y
                                        X \ll y
                                                  \111
x \leq y
         \lessgtr
                                        x \leq y
                                                  \lesseggtr
x \leq y
         \lesseqqgtr
                                       x \neq y
                                                  \doteqdot
x <del>⊆</del> y
         \risingdotseq
                                                  \fallingdotseg
                                       x = y
x \sim y
         \backsim
                                                  \backsimeq
                                       X \simeq Y
x \subseteq y
         \subseteqq
                                       X \subseteq Y
                                                  \Subset
                                                  \preccurlyeq
X \sqsubset y
         \sqsubset
                                        x \preccurlyeq y
x \not = y
         \curlyegprec
                                       x \not\preceq y
                                                  \precsim
\vartriangleleft
         \precapprox
                                       X \triangleleft y
         \trianglelefteg
                                                  \vDash
                                        x \models y
x \leq y
                                                  \smallsmile
x \Vdash y
         \Vvdash
                                        x \smile y
x \sim y
         \smallfrown
                                        x = y
                                                  \bumpeq
x \Rightarrow y
         \Bumpeq
                                        x \ge y
                                                  \geqq
                                                  \egslantgtr
X \geqslant V
         \qeqslant
                                        X \geqslant V
x \gtrsim y
         \qtrsim
                                        x \gtrsim y
                                                  \gtrapprox
         \qtrdot
X > y
                                        x ≫ y
                                                 \ggg
x \geqslant y
         \gtrless
                                        x \geqslant y
                                                  \gtreqless
x \ge y
         \qtreqqless
                                                  \eqcirc
                                        x = y
x \stackrel{>}{=} y
         \circeq
                                        x \triangleq y
                                                  \triangleq
x ∼ y
         \thicksim
                                        x \approx y
                                                  \thickapprox
x \supseteq y
         \supseteqq
                                        x \ni y
                                                  \Supset
X \supset Y
         \sqsupset
                                       x \succcurlyeq y
                                                  \succcurlyeq
         \curlyeqsucc
x \succeq y
                                        x \succeq y
                                                  \succsim
x \gtrsim y
         \succapprox
                                       x \triangleright y
                                                  \vartriangleright
x \trianglerighteq y
         \trianglerighteq
                                        x \Vdash y
                                                  \Vdash
         \shortmid
                                                  \shortparallel
X \mid Y
                                        X \parallel Y
         \between
                                                  \pitchfork
X \setminus Y
                                        x h y
                                                  \blacktriangleleft
X \propto y
         \varpropto
                                       X \triangleleft y
x : y
         \therefore
                                       X \ni V
                                                  \backepsilon
         \blacktriangleright x : y
                                                  \because
X \triangleright y
```

# 34 AMS Negated Relations

```
x ≮ y \nless
                                x ≰ y \nleq
x≰y \nleqslant
                                x⊈y
                                        \nleqq
x \leq y \setminus lneq
                                x \leq y
                                x ≨ y \lnsim
        \lvertneqq
x ≨ y
        \lnapprox
                                x ⊀ y \nprec
        \npreceq
\precnapprox
\nshortmid
x \not\perp y
                                x ≾ y \precnsim
                                x ≠y \nsim
x i y
                                x∤y
                                         \nmid
x \not\vdash y
        \nvdash
                                x⊭y \nvDash
x \not = y \setminus \text{ntriangleleft} \quad x \not = y \setminus \text{ntrianglelefteg}
x⊈y \nsubseteq
                                x \subsetneq y \setminus \text{subsetneq}
                                x \subsetneq y \subsetneqq
x \subsetneq y \setminus \text{varsubsetneq}
        \varsubsetneqq x \nmid y \ngtr
x ≨ y
x ≥ y
                                x \not\geqslant y
        \ngeq
                                         \ngeqslant
x \geq y
        \ngeqq
                                        \gneq
                                x ≩ y
x \ngeq y
        \gneqq
                                        \gvertneqq
                                x ≹y \gnapprox
x \gtrsim y
        \gnsim
                                x \stackrel{\sim}{\searrow} y \setminus \text{nsucceq}
x \not\succ y \setminus \text{nsucc}
        nsucceqq
                                x ≿y \succnsim
        \succnapprox
x ≇y \ncong
         \nshortparallel x∦y
                                         \nparallel
X + Y
                                x ⊭ y \nVDash
x \not\models y
        \nvDash
        \ntriangleright x \not\succeq y \ntrianglerighteq
x \not\triangleright y
x \not\supseteq y \nsupseteq x \not\supseteq y \supsetneq x \not\supseteq y \supsetneqq
                                x \( \frac{1}{2} \) \nsupseteqq
                                x⊋y \varsupsetneq
                                x ⊋ y \varsupsetneqq
```