

dm for beta-better

April-23-14 10:07 AM

HT convention

β -better calculus: Constraints. • Sum of column x is $(\sigma_x - 1)w$. • $\omega^{k-1} | \Lambda^k A$. • At $t_* = 1$, $\omega = 1$ and $A = 0$.

$$\begin{array}{c|cc|cc} \omega_1 & H_1 & \omega_2 & H_2 \\ - & \sigma_1 & * & \sigma_2 \\ T_1 & A_1 & T_2 & A_2 \end{array} \xrightarrow{\beta_b} \begin{array}{c|cc} \omega_1 \omega_2 & H_1 & H_2 \\ - & \sigma_1 & \sigma_2 \\ T_1 & \omega_2 A_1 & 0 \\ T_2 & 0 & \omega_1 A_2 \end{array}$$

$$\begin{array}{c|c} \omega & H \\ - & \sigma \\ u & \alpha \\ v & \beta \\ T & \gamma \end{array} \xrightarrow{tm_{uv}^{\omega}} \begin{array}{c|c} \omega & H \\ - & \sigma \\ w & \alpha + \beta \\ T & \gamma \end{array} \parallel (u,v)$$

$$\rho_{ux}^{\pm} = \frac{1}{\beta_b} \frac{x}{u} \frac{t_u^{\pm 1}}{t_u^{\pm 1} - 1}$$

$$\begin{array}{c|ccc} \omega & x & y & H \\ - & \sigma_x & \sigma_y & \sigma \\ T & \alpha & \beta & \gamma \end{array} \xrightarrow{hm_{xy}^{\omega}} \begin{array}{c|cc} \omega & z & H \\ - & \sigma_x \sigma_y & \sigma \\ T & \alpha + \sigma_x \beta & \gamma \end{array}$$

$$\begin{array}{c|c} \omega & H \\ - & \sigma \\ u & \alpha \\ T & \gamma \end{array} \xrightarrow{sw_{th}^{\omega}} \begin{array}{c|cc} \omega + \alpha & x & H \\ - & \sigma_x & \sigma \\ u & \sigma_x \alpha & \sigma_x \beta \\ T & \gamma & \delta + \frac{\alpha \delta - \gamma \beta}{\omega} \end{array} =: \begin{array}{c|c} \cdot & - \\ \cdot & - \\ \cdot & - \\ \cdot & - \end{array} \left| \begin{array}{c} \sigma_x & 0 \\ 0 & 1 \end{array} \right. \cdot A^{uz}$$

Note. $A^{uz} = \begin{pmatrix} \alpha & \beta \\ \gamma & \delta + \frac{\alpha \delta - \gamma \beta}{\omega} \end{pmatrix} = \begin{pmatrix} \alpha & \beta \\ \gamma & (\omega + \alpha) \delta - \gamma \beta \end{pmatrix} = \frac{1}{\omega} \left[(\omega + \alpha) \begin{pmatrix} \alpha & \beta \\ \gamma & \delta \end{pmatrix} - \begin{pmatrix} \alpha & \beta \\ \gamma & \delta \end{pmatrix} \right] = \frac{1}{\omega} [(\omega + a_{ux})A - a_{*x}a_{u*}]$.

$gm_3^{12} := sw_{12} \parallel tm_3^{12} \parallel hm_3^{12}$

w	1	2	—		$w+\beta$	1	2	—
1	α	β	\emptyset	$sw \rightarrow$	1	$\sigma_2 \alpha$	$\sigma_2 \beta$	$\sigma_2 \emptyset$
2	γ	δ	ϵ		2	$\gamma + \frac{\beta \gamma - \delta \alpha}{w}$	δ	$\epsilon + \frac{\beta \epsilon - \delta \emptyset}{w}$
1	ϕ	ψ	ξ		1	$\phi + \frac{\beta \phi - \psi \alpha}{w}$	ψ	$\xi + \frac{\beta \xi - \psi \emptyset}{w}$

$tm \rightarrow$

$w+\beta$	1	2	—
1	$\sigma_2 \alpha + \gamma + \frac{\beta \gamma - \delta \alpha}{w}$	$\sigma_2 \beta + \delta$	$\sigma_2 \emptyset + \epsilon + \frac{\beta \epsilon - \delta \emptyset}{w}$
1	$\phi + \frac{\beta \phi - \psi \alpha}{w}$	ψ	$\xi + \frac{\beta \xi - \psi \emptyset}{w}$

$hm \rightarrow$

$w+\beta$	1	—
1	$\sigma_2 \alpha + \gamma + \frac{\beta \gamma - \delta \alpha}{w} + \sigma_1 \sigma_2 \beta + \sigma_1 \delta$	$\sigma_2 \emptyset + \epsilon + \frac{\beta \epsilon - \delta \emptyset}{w}$
1	$\phi + \frac{\beta \phi - \psi \alpha}{w} + \sigma_1 \psi$	$\xi + \frac{\beta \xi - \psi \emptyset}{w}$