

## Small-step evaluation rules for L23 (corrected)

**Please note:** The greater-than rule with the box around it has been corrected. It used to include a less-than symbol, erroneously.

$$\begin{array}{cccc}
 \checkmark \frac{t_1 \rightarrow t_1'}{St_1 \rightarrow St_1'} & \checkmark \frac{}{PZ \rightarrow Z} & \checkmark \frac{}{PSnv_1 \rightarrow nv_1} & \checkmark \frac{t_1 \rightarrow t_1'}{Pt_1 \rightarrow Pt_1'} \\
 \\
 \checkmark \frac{}{[Z + t_2] \rightarrow t_2} & \checkmark \frac{}{[S nv_1 + t_2] \rightarrow [nv_1 + St_2]} & \checkmark \frac{t_1 \rightarrow t_1'}{[t_1 + t_2] \rightarrow [t_1' + t_2]} & \\
 \\
 \checkmark \frac{}{[Z - nv_2] \rightarrow Z} & \checkmark \frac{}{[nv_1 - Z] \rightarrow nv_1} & \checkmark \frac{}{[S nv_1 - S nv_2] \rightarrow [nv_1 - nv_2]} & \\
 \\
 & \checkmark \frac{t_1 \rightarrow t_1'}{[t_1 - t_2] \rightarrow [t_1' - t_2]} & \checkmark \frac{t_2 \rightarrow t_2'}{[v_1 - t_2] \rightarrow [v_1 - t_2']} & \\
 \\
 \checkmark \frac{}{[Z < Z] \rightarrow F} & \checkmark \frac{}{[Z < S nv_2] \rightarrow T} & \checkmark \frac{}{[nv_1 < Z] \rightarrow F} & \checkmark \frac{}{[S nv_1 < S nv_2] \rightarrow [nv_1 < nv_2]} \\
 \\
 & \checkmark \frac{t_1 \rightarrow t_1'}{[t_1 < t_2] \rightarrow [t_1' < t_2]} & \checkmark \frac{t_2 \rightarrow t_2'}{[v_1 < t_2] \rightarrow [v_1 < t_2']} & \\
 \\
 \checkmark \frac{}{[Z > nv_2] \rightarrow F} & \checkmark \frac{}{[S nv_1 > Z] \rightarrow T} & \checkmark \frac{}{\boxed{[S nv_1 > S nv_2] \rightarrow [nv_1 > nv_2]}} & \\
 \\
 & \checkmark \frac{t_1 \rightarrow t_1'}{[t_1 > t_2] \rightarrow [t_1' > t_2]} & \checkmark \frac{t_2 \rightarrow t_2'}{[v_1 > t_2] \rightarrow [v_1 > t_2']} & \\
 \\
 \checkmark \frac{}{[T \&\& t_2] \rightarrow t_2} & \checkmark \frac{}{[F \&\& t_2] \rightarrow F} & \checkmark \frac{t_1 \rightarrow t_1'}{[t_1 \&\& t_2] \rightarrow [t_1' \&\& t_2]} & \\
 \\
 \checkmark \frac{}{[T \parallel t_2] \rightarrow T} & \checkmark \frac{}{[F \parallel t_2] \rightarrow t_2} & \checkmark \frac{t_1 \rightarrow t_1'}{[t_1 \parallel t_2] \rightarrow [t_1' \parallel t_2]} & \\
 \\
 \checkmark \frac{}{[T ? t_2 : t_3] \rightarrow t_2} & \checkmark \frac{}{[F ? t_2 : t_3] \rightarrow t_3} & \checkmark \frac{t_1 \rightarrow t_1'}{[t_1 ? t_2 : t_3] \rightarrow [t_1' ? t_2 : t_3]} & 
 \end{array}$$