[sphere] $$\frac{r \rhd \mathit{real64}(\_)}{\langle\, \mathsf{sphere}(r), \sigma \,\rangle \to \langle\, \mathit{sphere}(r), \sigma \,\rangle}$$

[ne] $$\frac{n_1 \rhd \mathit{int32}(\_) \quad n_2 \rhd \mathit{int32}(\_)}{\langle\, \mathsf{ne}(n_1\ n_2), \sigma \,\rangle \to \langle\, \mathit{ne}(n_1\ n_2), \sigma \,\rangle}$$

[neRight] $$\frac{n \rhd \mathit{int32}(\_) \quad \langle\, E_2, \sigma \,\rangle \to \langle\, I_2, \sigma' \,\rangle}{\langle\, \mathsf{ne}(n\ E_2), \sigma \,\rangle \to \langle\, \mathsf{ne}(n\ I_2), \sigma' \,\rangle}$$

[neLeft] $$\frac{\langle\, E_1, \sigma \,\rangle \to \langle\, I_1, \sigma' \,\rangle}{\langle\, \mathsf{ne}(E_1\ E_2), \sigma \,\rangle \to \langle\, \mathsf{ne}(I_1\ E_2), \sigma' \,\rangle}$$

[sequenceDone] $\langle\, \mathsf{seq}(\mathit{done}\ C), \sigma \,\rangle \to \langle\, C, \sigma \,\rangle$

[sequence] $$\frac{\langle\, C_1, \sigma \,\rangle \to \langle\, C_1', \sigma' \,\rangle}{\langle\, \mathsf{seq}(C_1\ C_2), \sigma \,\rangle \to \langle\, \mathsf{seq}(C_1'\ C_2), \sigma' \,\rangle}$$

[union] $$\frac{\langle\, E_1, \sigma \,\rangle \to \langle\, I_1, \sigma' \,\rangle}{\langle\, \mathsf{union}(E_1\ E_2), \sigma \,\rangle \to \langle\, \mathit{union}(I_1\ E_2), \sigma' \,\rangle}$$

[intersection] $$\frac{\langle\, E_1, \sigma \,\rangle \to \langle\, I_1, \sigma' \,\rangle}{\langle\, \mathsf{intersection}(E_1\ E_2), \sigma \,\rangle \to \langle\, \mathit{intersection}(I_1\ E_2), \sigma' \,\rangle}$$

[sub] $$\frac{n_1 \rhd \mathit{int32}(\_) \quad n_2 \rhd \mathit{int32}(\_)}{\langle\, \mathsf{sub}(n_1\ n_2), \sigma \,\rangle \to \langle\, \mathit{sub}(n_1\ n_2), \sigma \,\rangle}$$

[subRight] $$\frac{n \rhd \mathit{int32}(\_) \quad \langle\, E_2, \sigma \,\rangle \to \langle\, I_2, \sigma' \,\rangle}{\langle\, \mathsf{sub}(n\ E_2), \sigma \,\rangle \to \langle\, \mathsf{sub}(n\ I_2), \sigma' \,\rangle}$$

[subLeft] $$\frac{\langle\, E_1, \sigma \,\rangle \to \langle\, I_1, \sigma' \,\rangle}{\langle\, \mathsf{sub}(E_1\ E_2), \sigma \,\rangle \to \langle\, \mathsf{sub}(I_1\ E_2), \sigma' \,\rangle}$$

[variable] $$\frac{\mathit{get}(\sigma\ R) \rhd Z}{\langle\, \mathsf{deref}(R), \sigma \,\rangle \to \langle\, Z, \sigma \,\rangle}$$

[backend] $\langle\, \mathsf{backend}(P_1\ P_2\ P_3), \sigma \,\rangle \to \mathit{user}(P_1\ P_2\ P_3)$

[ifTrue] $\langle\, \mathsf{if}(\mathit{bool}(\mathsf{True})\ C_1\ C_2), \sigma \,\rangle \to \langle\, C_1, \sigma \,\rangle$

[ifFalse] $\langle\, \mathsf{if}(\mathit{bool}(\mathsf{False})\ C_1\ C_2), \sigma \,\rangle \to \langle\, C_2, \sigma \,\rangle$

[ifResolve] $$\frac{\langle\, E, \sigma \,\rangle \to \langle\, E', \sigma' \,\rangle}{\langle\, \mathsf{if}(E\ C_1\ C_2), \sigma \,\rangle \to \langle\, \mathsf{if}(E'\ C_1\ C_2), \sigma' \,\rangle}$$

[while] $\langle\, \mathsf{while}(E\ C), \sigma \,\rangle \to \langle\, \mathsf{if}(E\ \mathsf{seq}(C\ \mathsf{while}(E\ C))\ \mathit{done}), \sigma \,\rangle$

[assign] $$\frac{n \rhd \mathit{int32}(\_)}{\langle\, \mathsf{assign}(X\ \ n), \sigma \,\rangle \rightarrow \langle\, \mathit{done}, \mathit{put}(\sigma\ \ X\ \ n) \,\rangle}$$

[assignResolve] $$\frac{\langle\, E, \sigma \,\rangle \rightarrow \langle\, I, \sigma' \,\rangle}{\langle\, \mathsf{assign}(X\ \ E), \sigma \,\rangle \rightarrow \langle\, \mathsf{assign}(X\ \ I), \sigma' \,\rangle}$$

[gt] $$\frac{n_1 \rhd \mathit{int32}(\_) \quad n_2 \rhd \mathit{int32}(\_)}{\langle\, \mathsf{gt}(n_1\ \ n_2), \sigma \,\rangle \rightarrow \langle\, \mathit{gt}(n_1\ \ n_2), \sigma \,\rangle}$$

[gtRight] $$\frac{n \rhd \mathit{int32}(\_) \quad \langle\, E_2, \sigma \,\rangle \rightarrow \langle\, I_2, \sigma' \,\rangle}{\langle\, \mathsf{gt}(n\ \ E_2), \sigma \,\rangle \rightarrow \langle\, \mathsf{gt}(n\ \ I_2), \sigma' \,\rangle}$$

[gtLeft] $$\frac{\langle\, E_1, \sigma \,\rangle \rightarrow \langle\, I_1, \sigma' \,\rangle}{\langle\, \mathsf{gt}(E_1\ \ E_2), \sigma \,\rangle \rightarrow \langle\, \mathsf{gt}(I_1\ \ E_2), \sigma' \,\rangle}$$

[cube] $$\frac{d \rhd \mathit{real64}(\_)}{\langle\, \mathsf{cube}(d), \sigma \,\rangle \rightarrow \langle\, \mathit{cube}(d), \sigma \,\rangle}$$

[cylinder] $$\frac{r \rhd \mathit{real64}(\_) \quad h \rhd \mathit{real64}(\_)}{\langle\, \mathsf{cylinder}(r\ \ h), \sigma \,\rangle \rightarrow \langle\, \mathit{cylinder}(r\ \ h), \sigma \,\rangle}$$
