

1 Base calculus (3.3.1)

$$\frac{x : t \in \Gamma}{\Gamma \vdash x \uparrow t} \quad (\text{T-VAR})$$

$$\frac{\Gamma \vdash t_1 \Downarrow \text{Set} \quad \Gamma, x \Downarrow t_1 \vdash t_2 \uparrow t_3}{\Gamma \vdash \lambda x : t_1. t_2 \uparrow (x : t_1) \rightarrow t_3} \quad (\text{T-ABS})$$

$$\frac{\Gamma \vdash t_1 \Downarrow \text{Set} \quad \Gamma, x \Downarrow t_1 \vdash t_2 \Downarrow \text{Set}}{\Gamma \vdash (x : t_1) \rightarrow t_2 \uparrow \text{Set}} \quad (\text{T-PI})$$

$$\frac{\Gamma \vdash t_1 \uparrow t_3 \quad t_3 \rightarrow^* ((x : t_4) \rightarrow t_5) \quad \Gamma \vdash t_2 \Downarrow t_4}{\Gamma \vdash t_1 \ t_2 \uparrow t_5[x \mapsto t_2]} \quad (\text{T-APP})$$

$$\frac{}{\Gamma \vdash \text{Set} \uparrow \text{Set}} \quad (\text{T-SETINSET})$$

2 Sigma types (4.2)