

$$\frac{}{\Gamma : u \mapsto \lambda x. e, \Gamma' \Downarrow \Gamma : u \mapsto \lambda x. e, \Gamma'} \text{Lam}$$

$$\frac{\Gamma : v \mapsto e, u \mapsto vx, \Gamma' \Downarrow \Delta : v \mapsto \lambda y. e', u \mapsto vx, \Delta' \quad \Delta : u \mapsto e'[x/y], \Delta' \Downarrow \Theta : u \mapsto z, \Theta'}{\Gamma : u \mapsto ex, \Gamma' \Downarrow \Theta : u \mapsto z, \Theta'} \text{App}$$

$$\frac{\Gamma : x \mapsto e, u \mapsto x, \Gamma' \Downarrow \Delta : x \mapsto z, u \mapsto z, \Delta'}{\Gamma, x \mapsto e : u \mapsto x, \Gamma' \Downarrow \Delta, x \mapsto z : u \mapsto z, \Delta'} \text{Var}$$

$$\frac{\Gamma, x_1 \mapsto e_1, \dots, x_n \mapsto e_n : u \mapsto e, \Gamma' \Downarrow \Delta : u \mapsto z, \Delta'}{\Gamma : u \mapsto \text{let } x_1 = e_1, \dots, x_n = e_n \text{ in } e, \Gamma' \Downarrow \Delta : u \mapsto z, \Delta'} \text{Let}$$