

- pairs (linear only)

$$\frac{\Delta; \Gamma_1 \vdash e_1 : (T_1; \Gamma_2) \quad \Delta; \Gamma_2 \vdash e_2 : (T_2; \Gamma_3)}{\Delta; \Gamma_1 \vdash (e_1, e_2) : ((T_1, T_2); \Gamma_3)}$$

$$\frac{\Delta; \Gamma_1 \vdash e_1 : ((T_1, T_2); \Gamma_2) \quad \Delta; \Gamma_2 \vdash e_2 : (T_3; \Gamma_3)}{\Delta; \Gamma_1 \vdash \text{let } x, y = e_1 \text{ in } e_2 : (T_3; \Gamma_3)}$$

- datatypes

$$\frac{C : T \text{ constructor}}{\Delta; \Gamma \vdash C : (T; \Gamma)}$$

$$\frac{\begin{array}{l} C_k : U_1 \rightarrow \dots \rightarrow U_{n_k} \rightarrow D \text{ constructor} \quad \Delta \vdash T_i \sim T_j \\ \Delta; \Gamma_1 \vdash e : (T; \Gamma_2) \quad \Delta \vdash T \sim D \quad \Delta; \Gamma_2, x_1 : U_1, \dots, x_{n_k} : U_{n_k} \vdash e_k : (T_k; E_k) \end{array}}{\Delta; \Gamma_1 \vdash \text{case } e \text{ of } C_k x_1 \dots x_{n_k} \rightarrow e_k : (T_1, \text{lub}(E_k))}$$