

$$\begin{array}{c}
\overline{C <: C} \text{ SUBREFL} \qquad \overline{\text{int} <: \text{int}} \text{ SUBINT} \qquad \overline{\text{str} <: \text{str}} \text{ SUBSTR} \\
\\
\frac{\text{class } C \text{ extends } D}{!C <: !D} \text{ SUBCLASS} \qquad \frac{!C <: !D}{C <: D} \text{ SUBOPTCONV} \\
\\
\overline{\text{any} <: \text{int}} \text{ SUBANYINT} \qquad \overline{\text{any} <: \text{str}} \text{ SUBANYSTR}
\end{array}$$

$$\begin{array}{c}
\frac{\Gamma(x) = A}{\Gamma \vdash x : A} \text{ TVAR} \qquad \overline{\Gamma \vdash \text{string} : \text{str}} \text{ TSTR} \qquad \overline{\Gamma \vdash \text{int} : \text{int}} \text{ TINT} \\
\\
\frac{\overline{\Gamma \vdash e_i : \tau_i} \quad \Gamma \vdash x : \{\dots, l(\overline{\tau'_i}) : \tau', \dots\} \quad \overline{\tau_i <: \tau'_i}}{\Gamma \vdash x.l(\overline{e_i}) : \tau'} \text{ TAPP} \\
\\
\frac{\tau_1 <: \text{int} \quad \Gamma \vdash \tau \quad \Gamma \vdash e_1 : \tau_1 \quad \Gamma \vdash e_2 : \tau_2 \quad \Gamma \vdash e_3 : \tau_3 \quad \tau_2 <: \tau \quad \tau_3 <: \tau}{\Gamma \vdash \text{if } e_1 \ e_2 \ e_3 : \tau} \text{ TIF} \\
\\
\frac{\Gamma \vdash e_1 : \tau_1 \quad \Gamma \vdash e_2 : \tau_2 \quad \tau_1 <: \text{int} \quad \tau_2 <: \text{int}}{\Gamma \vdash e_1 + e_2 : \text{int}} \text{ TPLUS} \\
\\
\frac{\Gamma \vdash e : \{\dots l : \tau \dots\}}{\Gamma \vdash e.l : \tau} \text{ TFIELD} \\
\\
\frac{\Gamma \vdash e_i : \tau_i \quad \Gamma(C) = \{\dots, \overline{l : \tau'}, \dots\} \quad \overline{\tau <: \tau'}}{\Gamma \vdash \text{new } C(\overline{e}) : C} \text{ TNEW} \\
\\
\frac{\overline{\Gamma \vdash \overline{D}} \quad \overline{\Gamma \vdash e : \tau'''} \quad \overline{\tau''' <: \tau'}}{\Gamma \vdash \text{class } C \text{ extends } \overline{D} \ \{\overline{l : \tau}, \overline{l'(\overline{l'' : \tau''}) : \tau'} = \{e\}\}} \text{ TCLASS}
\end{array}$$