Equalities

- Variable
- Expr
- Base (num)
- Construct

Unification

Set of constraints

Each constraint is an eq.
Each eq. has two terms
Each term is one of

Unify: \( \text{set (constraints)} \rightarrow \{ \text{mapping} [\Rightarrow \{ \frac{2}{1+t} \}] \}

Substitution \( \Theta \)
base

if \( t_2 \) is base

if \( t_2 \) is base as \( t_1 \)

else solves for \( t_2 \) onto constraints

\[ \phi(t) = t_2 \]

\( \phi \)

\( \phi \)

\( \phi \)
\[
\text{Const} \begin{array}{c}
\text{if } t_2 \text{ is base - error} \\
\text{if } t_2 \text{ is constructed} \\
(t_{1l} \to t_{2l}) \\
\text{push } t_{1l} = t_{1r} \\
t_{2l} = t_{2r} \\
\end{array}
\]

\[
\text{PRINCIPAL TYPES}
\]

\[
\text{id} \equiv (\lambda (x : _) : _ - x) : [x] \to [x]
\]

\[
\text{in} \begin{array}{c}
\text{if } (\text{id} \text{ true}) \\
(\text{id} \text{ 5}) \\
(\text{id} \text{ 6}) \\
\end{array}
\]

\[
'\alpha \to '\alpha
\]

\[
'\alpha = \text{bool}
\]

\[
'\alpha = \text{num}
\]

\[
'\alpha = \text{num}
\]