

CONSTRAINT GENERATION

$\text{CGen}(\Gamma, x) =$
let a be fresh
let $\forall a_1 \dots a_k. A = \Gamma(x)$
let b_1, \dots, b_k be fresh
 $(a, \{a \stackrel{?}{=} A[b_1/a_1, \dots, b_k/a_k]\})$

$\text{CGen}(\Gamma, MN) =$
let a be fresh
let $(b, C_1) = \text{CGen}(\Gamma, M)$
let $(c, C_2) = \text{CGen}(\Gamma, N)$
 $(a, C_1 \cup C_2 \cup \{b \stackrel{?}{=} c \rightarrow a\})$

$\text{CGen}(\Gamma, \lambda x. M) =$
let a be fresh
let b be fresh
let $(c, C) = \text{CGen}(\Gamma \cup \{x : b\}, M)$
 $(a, C \cup \{a \stackrel{?}{=} b \rightarrow c\})$

