Atomic Types 
$$T$$
  $:=$   $A \rightarrow B$   $A \rightarrow B$ 

Figure 1. Syntax.

Figure 3. Disjointness.

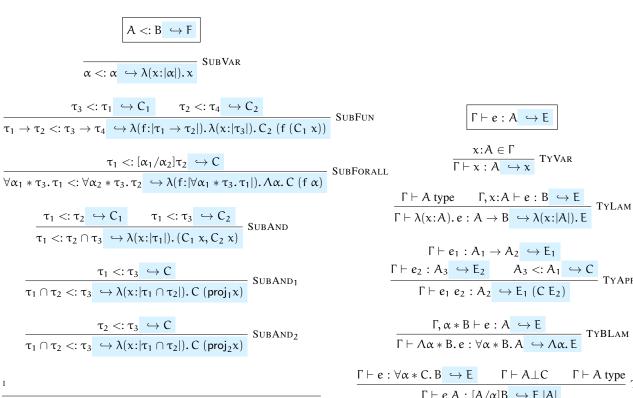


Figure 2. Subtyping.

$$\epsilon \vdash 1, 2 : (Int * Int) \Rightarrow Int \cap Int$$

**Definition 1.** (Disjointness) Two sets S and T are *disjoint* if there does not exist an element x, such that  $x \in S$  and  $x \in T$ .

**Definition 2.** (Disjointness) Two types A and B are *disjoint* if there does not exist an expression e, which is not a merge, such that  $\epsilon \vdash e : A', \epsilon \vdash e : B', A' <: A, \text{ and } B' <: B.$ 

Figure 4. Typing.

**Definition 3.** (Disjointness)  $A \perp B = \not\exists C.A <: C \land B <: C$ 

Two types A and B are disjoint if their least common supertype is  $\top.$