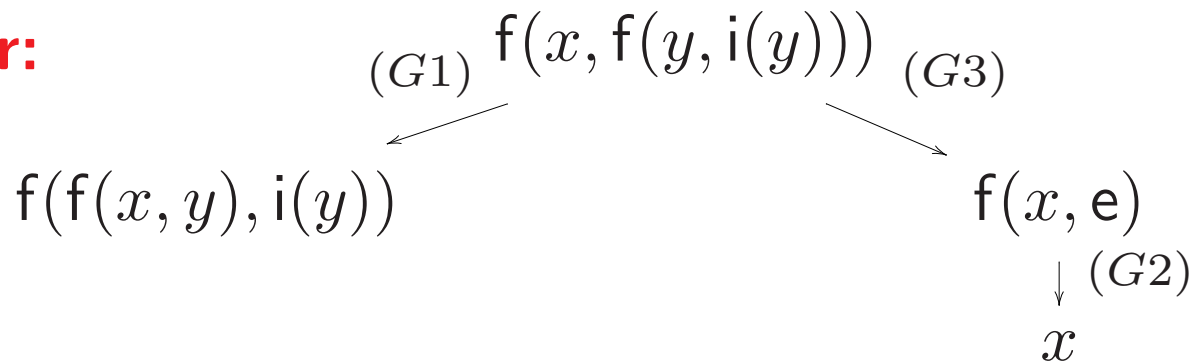


$$\mathcal{R}_0 : f(x, f(y, z)) \rightarrow f(f(x, y), z) \quad (G1)$$

$$f(x, e) \rightarrow x \quad (G2)$$

$$f(x, i(x)) \rightarrow e \quad (G3)$$

**Critical Pair:**



$$\mathcal{R}_1 : \mathcal{R}_0 \cup \{(G4)\} \quad \text{with} \quad f(f(x, y), i(y)) \rightarrow x \quad (G4)$$

**Success:**

$$\mathcal{R}_0, \mathcal{R}_1, \dots, \mathcal{R}_n$$

and all  $\langle s, t \rangle \in CP(\mathcal{R}_n)$  are joinable

**Failure:**

$$\mathcal{R}_0, \mathcal{R}_1, \dots, \mathcal{R}_n \text{ and } \langle s, t \rangle \in CP(\mathcal{R}_n)$$

with normal forms  $s', t'$  where  $s' \neq t', s' \not\sim t', t' \not\sim s'$ .

**Non-Termination:**  $\mathcal{R}_0, \mathcal{R}_1, \dots$  terminating, equivalent, not confluent