t19_trees_9 (TM-PDpgWz5d8naP1ZZAXYutNo4fFEVmUHgiL)

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Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $v3\_trees\_3 : \iota \Rightarrow o$ be given. Let $k9\_trees\_9 : \iota \Rightarrow \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1\_trees\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k5\_trees\_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.((\neg v1\_xboole\_0\ X0) \wedge (v3\_trees\_3\ X0)) \Rightarrow (k9\_trees\_9\ X0 = ReplSep2\ (toset\ (\lambda X1 : \iota.m1\_subset\_1\ X1\ X0))\ (\lambda X1 : \iota.\ toset\ (\lambda X2 : \iota.m1\_trees\_1\ X2\ (k9\_xtuple\_0\ X1)))\ (\lambda X1 : \iota.\ \lambda X2 : \iota.True)\ (\lambda X1 : \iota.\lambda X2 : \iota.k5\_trees\_2\ X1\ X2)) \tag{1}$$

Theorem 1

$$\forall X0.\forall X1.((\neg v1\_xboole\_0\ X1) \wedge (v3\_trees\_3\ X1)) \Rightarrow (\ (X0 \in k9\_trees\_9\ X1) \Leftrightarrow (\exists X2.(m1\_subset\_1\ X2\ X1) \wedge (\exists X3.\ (m1\_trees\_1\ X3\ (k9\_xtuple\_0\ X2)) \wedge (X0 = k5\_trees\_2\ X2\ X3)))))$$