

t8_binarith
(TMS9vVkkMZyjrpicApCVsTSVqHQf6YrWeY)

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Let $v1_xboolean : \iota \Rightarrow o$ be given. Let $k10_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_margrel1 : \iota$ be given. Let $k1_xboolean : \iota$ be given. Assume the following.

$$\forall X0.(v1_xboolean X0) \Rightarrow (\forall X1.(v1_xboolean X1) \Rightarrow (k10_xboolean X0 (k10_xboolean X0 X1) = X1)) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xboolean X0) \Rightarrow (k10_xboolean X0 X0 = k1_xboolean) \quad (2)$$

Assume the following.

$$k7_margrel1 = k1_xboolean \quad (3)$$

Assume the following.

$$v1_xboolean k1_xboolean \quad (4)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xboolean X0) \wedge (v1_xboolean X1)) \Rightarrow (k10_xboolean X0 X1 = k10_xboolean X1 X0) \quad (5)$$

Theorem 1 $\forall X0.(v1_xboolean X0) \Rightarrow (k10_xboolean k7_margrel1 X0 = X0)$.