

t68_bvfunc_1

(TMXxvaQB182fHCjQzeyKNoX6HRDWuRZEeC1)

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Let $v1_xboolean : \iota \Rightarrow o$ be given. Let $k6_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_margrel1 : \iota$ be given. Let $k2_xboolean : \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v1_xboolean X0) \Rightarrow (\forall X1.(v1_xboolean X1) \Rightarrow ((\\ (k6_xboolean X0 X1 = k2_xboolean) \wedge (k6_xboolean X1 X0 = k2_xboolean)) \Rightarrow \\ (X0 = X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xboolean X0) \Rightarrow (\forall X1.(v1_xboolean X1) \Rightarrow (\forall X2. \\ (v1_xboolean X2) \Rightarrow (k6_xboolean (k6_xboolean X0 (k6_xboolean X1 \\ X2)) (k6_xboolean X1 (k6_xboolean X0 X2)) = k2_xboolean))) \end{aligned} \tag{2}$$

Assume the following.

$$k8_margrel1 = k2_xboolean \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v1_xboolean X0) \wedge (v1_xboolean X1)) \Rightarrow (\\ v1_xboolean (k6_xboolean X0 X1)) \tag{4}$$

Assume the following.

$$v1_xboolean k2_xboolean \tag{5}$$

Theorem 1

$$\begin{aligned} \forall X0.(v1_xboolean X0) \Rightarrow (\forall X1.(v1_xboolean X1) \Rightarrow (\forall X2. \\ (v1_xboolean X2) \Rightarrow ((k6_xboolean X0 (k6_xboolean X1 X2) = k8_margrel1) \Rightarrow \\ (k6_xboolean X1 (k6_xboolean X0 X2) = k8_margrel1)))) \end{aligned}$$