t54_bvfunc_1 (TMPpV27FQv2x5Gw3QyoUpdD34hgPV8Y13W8)

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Let $v1\_xboolean : \iota \Rightarrow o$ be given. Let $k9\_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_xboolean : \iota \Rightarrow \iota$ be given. Let $k7\_margrel1 : \iota$ be given. Let $k8\_margrel1 : \iota$ be given. Let $k2\_xboolean : \iota$ be given. Assume the following.

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow (k3\_xboolean\ (k9\_xboolean\ X0\ (k3\_xboolean\ X0)) = k2\_xboolean) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow (((X0 = k7\_margrel1) \Rightarrow (k3\_xboolean\ X0 = k8\_margrel1)) \wedge (((k3\_xboolean\ X0 = k8\_margrel1) \Rightarrow (X0 = k7\_margrel1)) \wedge (((X0 = k8\_margrel1) \Rightarrow (k3\_xboolean\ X0 = k7\_margrel1)) \wedge ((k3\_xboolean\ X0 = k7\_margrel1) \Rightarrow (X0 = k8\_margrel1))))) \tag{2}$$

Assume the following.

$$k8\_margrel1 = k2\_xboolean \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xboolean\ X0) \wedge (v1\_xboolean\ X1)) \Rightarrow (v1\_xboolean\ (k9\_xboolean\ X0\ X1)) \tag{4}$$

Assume the following.

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow (v1\_xboolean\ (k3\_xboolean\ X0)) \tag{5}$$

Theorem 1

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow ((k9\_xboolean\ X0\ (k3\_xboolean\ X0) = k7\_margrel1) \wedge (k3\_xboolean\ (k9\_xboolean\ X0\ (k3\_xboolean\ X0)) = k8\_margrel1))$$