

t44\_bvfunc\_1 (TMUXYacDBM-  
FLU2m9Aj2GmBZay1AEPRjhLo2)

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Let  $v1\_xboolean : \iota \Rightarrow o$  be given. Let  $k8\_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_margrel1 : \iota$  be given. Let  $k8\_margrel1 : \iota$  be given. Let  $k4\_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k3\_xboolean : \iota \Rightarrow \iota$  be given. Let  $k1\_xboolean : \iota$  be given. Let  $k6\_numbers : \iota$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xboolean X0) \Rightarrow (\forall X1.(v1\_xboolean X1) \Rightarrow (( \\ & (k4\_xboolean X0 X1 = k8\_margrel1) \Rightarrow ((X0 = k8\_margrel1) \wedge (X1 = k8\_margrel1))) \wedge \\ & (((X0 = k8\_margrel1) \wedge (X1 = k8\_margrel1)) \Rightarrow (k4\_xboolean X0 X1 = \\ & k8\_margrel1)) \wedge ((\neg(k4\_xboolean X0 X1 = k7\_margrel1) \wedge ((X0 \neq k7\_margrel1) \wedge \\ & (X1 \neq k7\_margrel1))) \wedge (((X0 = k7\_margrel1) \vee (X1 = k7\_margrel1)) \Rightarrow \\ & (k4\_xboolean X0 X1 = k7\_margrel1)))))) \end{aligned} \tag{1}$$

Assume the following.

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

Assume the following.

$$k7\_margrel1 = k1\_xboolean \tag{3}$$

Assume the following.

$$v1\_xboolean k1\_xboolean \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xboolean X0) \Rightarrow (\forall X1.(v1\_xboolean X1) \Rightarrow (k8\_xboolean \\ & X0 X1 = k3\_xboolean (k4\_xboolean X0 X1))) \end{aligned} \tag{5}$$

Assume the following.

$$k1\_xboolean = k6\_numbers \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xboolean\ X0)\wedge(v1\_xboolean\ X1))\Rightarrow(k8\_xboolean\ X0\ X1 = k8\_xboolean\ X1\ X0) \quad (7)$$

**Theorem 1**

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