t12_binari_3 (TMHiEhWbT7j2NNKX6md5TGWJxqcZurESYpB)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6\_margrel1 : \iota$ be given. Let $k1\_binarith : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_margrel1 : \iota$ be given. Let $k7\_margrel1 : \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $v1\_xboolean : \iota \Rightarrow o$ be given. Let $k5\_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_0 : \iota$ be given. Let $k2\_xboolean : \iota$ be given. Let $k1\_xboolean : \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $np\_\_1 : \iota$ be given. Assume the following.

$$\forall X0.(v1\_xboole\_0\ X0) \Rightarrow (X0 = k1\_xboole\_0) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow (k5\_xboolean\ X0\ k7\_margrel1 = X0) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow (k5\_xboolean\ X0\ k8\_margrel1 = k8\_margrel1) \tag{3}$$

Assume the following.

$$v1\_xboole\_0\ np\_\_0 \tag{4}$$

Assume the following.

$$k8\_margrel1 = k2\_xboolean \tag{5}$$

Assume the following.

$$k7\_margrel1 = k1\_xboolean \tag{6}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{7}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k6\_margrel1) \wedge (m1\_subset\_1\ X1\ k6\_margrel1)) \Rightarrow (k1\_binarith\ X0\ X1 = k5\_xboolean\ X0\ X1) \tag{8}$$

Assume the following.

$$m1\_subset\_1\ k8\_margrel1\ k6\_margrel1 \tag{9}$$

Assume the following.

$$m1\_subset\_1\ k7\_margrel1\ k6\_margrel1 \tag{10}$$

Assume the following.

$$\forall X0.(v1\_xboolean\ X0) \Leftrightarrow ((X0 = k1\_xboolean) \vee (X0 = k2\_xboolean)) \tag{11}$$

Assume the following.

$$k2\_xboolean = np\_\_1 \tag{12}$$

Assume the following.

$$k1\_xboolean = k6\_numbers \tag{13}$$

Assume the following.

$$\begin{gathered}\forall X0.\forall X1.((m1\_subset\_1\ X0\ k6\_margrel1) \wedge (m1\_subset\_1 \\ X1\ k6\_margrel1)) \Rightarrow (k1\_binarith\ X0\ X1 = k1\_binarith\ X1\ X0)\end{gathered} \tag{14}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k6\_margrel1) \Rightarrow (v1\_xboolean\ X0) \tag{15}$$

Theorem 1

$$\begin{gathered}\forall X0.(m1\_subset\_1\ X0\ k6\_margrel1) \Rightarrow (\forall X1.(m1\_subset\_1 \\ X1\ k6\_margrel1) \Rightarrow ((\neg(k1\_binarith\ X0\ X1 = k8\_margrel1) \wedge ((X0 \neq k8\_margrel1) \wedge \\ (X1 \neq k8\_margrel1))) \wedge ((((X0 = k8\_margrel1) \vee (X1 = k8\_margrel1)) \Rightarrow \\ (k1\_binarith\ X0\ X1 = k8\_margrel1)) \wedge (((k1\_binarith\ X0\ X1 = k7\_margrel1) \Rightarrow \\ ((X0 = k7\_margrel1) \wedge (X1 = k7\_margrel1))) \wedge (((X0 = k7\_margrel1) \wedge \\ (X1 = k7\_margrel1)) \Rightarrow (k1\_binarith\ X0\ X1 = k7\_margrel1))))))\end{gathered}$$