t132_xboolean (TMUxGm-Com3eAR8m7KKh1C5z4mryyzwugdMF)

October 27, 2020

Let $v1\_xboolean : \iota \Rightarrow o$ be given. Let $k7\_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2\_xboolean : \iota$ be given. Let $k6\_xboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Assume the following.

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow (\forall X1.(v1\_xboolean\ X1) \Rightarrow (k6\_xboolean\ X0\ (k7\_xboolean\ X0\ X1) = k6\_xboolean\ X0\ X1)) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow (k7\_xboolean\ X0\ X0 = k2\_xboolean) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow (\forall X1.(v1\_xboolean\ X1) \Rightarrow ((k6\_xboolean\ X0\ X1 = k2\_xboolean) \wedge (k6\_xboolean\ X1\ X0 = k2\_xboolean)) \Rightarrow (X0 = X1))) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow (\forall X1.(v1\_xboolean\ X1) \Rightarrow (k6\_xboolean\ X0\ (k6\_xboolean\ X1\ X0) = k2\_xboolean)) \tag{4}$$

Assume the following.

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow (k6\_xboolean\ X0\ X0 = k2\_xboolean) \tag{5}$$

Assume the following.

$$k2\_xboolean = np\_\_1 \tag{6}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xboolean\ X0) \wedge (v1\_xboolean\ X1)) \Rightarrow (k7\_xboolean\ X0\ X1 = k7\_xboolean\ X1\ X0) \tag{7}$$

Theorem 1

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow (\forall X1.(v1\_xboolean\ X1) \Rightarrow (k7\_xboolean\ X0\ X1 = k2\_xboolean) \Leftrightarrow ((k6\_xboolean\ X0\ X1 = k2\_xboolean) \wedge (k6\_xboolean\ X1\ X0 = k2\_xboolean))))$$