t138_xboolean (TMNzgBujTX7sACCHtsDX61q6sR2qTKMHWNn)

October 27, 2020

Let $v1\_xboolean : \iota \Rightarrow o$ 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 $k2\_xboolean : \iota$ be given. Let $k6\_numbers : \iota$ be given. Assume the following.

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow (k4\_xboolean\ X0\ X0 = X0) \tag{1}$$

Assume the following.

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow (k3\_xboolean\ (k4\_xboolean\ X0\ (k3\_xboolean\ X0)) = k2\_xboolean) \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow (\forall X1.(v1\_xboolean\ X1) \Rightarrow ((k4\_xboolean\ X0\ X1 = k2\_xboolean) \Rightarrow ((X0 = k2\_xboolean) \wedge (X1 = k2\_xboolean)))) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow (k3\_xboolean\ (k3\_xboolean\ X0) = X0) \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.((v1\_xboolean\ X0) \wedge (v1\_xboolean\ X1)) \Rightarrow (v1\_xboolean\ (k4\_xboolean\ X0\ X1)) \tag{5}$$

Assume the following.

$$v1\_xboolean\ k1\_xboolean \tag{6}$$

Assume the following.

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow (v1\_xboolean\ (k3\_xboolean\ X0)) \tag{7}$$

Assume the following.

$$\forall X0.(v1\_xboolean\ X0) \Leftrightarrow ((X0 = k1\_xboolean) \vee (X0 = k2\_xboolean)) \tag{8}$$

Assume the following.

$$k1\_xboolean = k6\_numbers \tag{9}$$

Theorem 1

$$\forall X0.(v1\_xboolean\ X0) \Rightarrow (k4\_xboolean\ X0\ (k3\_xboolean\ X0) = k1\_xboolean)$$