t4_modal_1 (TMMotZyjcCm-LkCrhW1FgEWBghTB3Sp64A32)

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Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1\_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r3\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4\_ordinal1 : \iota$ be given. Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k5\_numbers) \Rightarrow (\forall X2.(m2\_finseq\_1\ X2\ k5\_numbers) \Rightarrow (\neg(X0 \neq X1) \wedge (r2\_xboole\_0\ (k12\_finseq\_1\ k5\_numbers\ X0)\ (k8\_finseq\_1\ k5\_numbers\ (k12\_finseq\_1\ k5\_numbers\ X1)\ X2))))) \tag{1}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k5\_numbers) \Rightarrow (\forall X2.(m2\_finseq\_1\ X2\ k5\_numbers) \Rightarrow (\neg(X0 \neq X1) \wedge (r3\_xboole\_0\ (k12\_finseq\_1\ k5\_numbers\ X0)\ (k8\_finseq\_1\ k5\_numbers\ (k12\_finseq\_1\ k5\_numbers\ X1)\ X2))))) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.(\neg(\neg r2\_xboole\_0\ X0\ X1) \wedge ((X0 \neq X1) \wedge (\neg r2\_xboole\_0\ X1\ X0))) \Leftrightarrow (r3\_xboole\_0\ X0\ X1) \tag{3}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{4}$$

Assume the following.

$$\forall X0.\forall X1.(r2\_xboole\_0\ X0\ X1) \Leftrightarrow ((r1\_tarski\ X0\ X1) \wedge (X0 \neq X1)) \tag{5}$$

Theorem 1

$$\forall X0.(m1\_subset\_1\ X0\ k5\_numbers) \Rightarrow (\forall X1.(m1\_subset\_1\ X1\ k5\_numbers) \Rightarrow (\forall X2.(m2\_finseq\_1\ X2\ k5\_numbers) \Rightarrow (\neg(X0 \neq X1) \wedge (r1\_tarski\ (k12\_finseq\_1\ k5\_numbers\ X0)\ (k8\_finseq\_1\ k5\_numbers\ (k12\_finseq\_1\ k5\_numbers\ X1)\ X2))))))$$