t9_modal_1 (TMPYt1rhFw2RX91Py7ufJQ3XChpysrzpYEG)

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Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5\_numbers : \iota$ be given. Let $r2\_xboole\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $k7\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow (\forall X1.((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finseq\_1\ X1))) \Rightarrow (\forall X2.((v1\_relat\_1\ X2) \wedge ((v1\_funct\_1\ X2) \wedge (v1\_finseq\_1\ X2))) \Rightarrow ((r2\_xboole\_0\ (k7\_finseq\_1\ X0\ X1)\ (k7\_finseq\_1\ X0\ X2)) \Rightarrow (r2\_xboole\_0\ X1\ X2)))) \tag{1}$$

Assume the following.

$$\forall X0.\forall X1.(m2\_finseq\_1\ X1\ X0) \Leftrightarrow (m1\_finseq\_1\ X1\ X0) \tag{2}$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((m1\_finseq\_1\ X1\ X0) \wedge (m1\_finseq\_1\ X2\ X0)) \Rightarrow (k8\_finseq\_1\ X0\ X1\ X2 = k7\_finseq\_1\ X1\ X2) \tag{3}$$

Assume the following.

$$\forall X0.\forall X1.(m1\_finseq\_1\ X1\ X0) \Rightarrow ((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finseq\_1\ X1))) \tag{4}$$

Theorem 1

$$\forall X0.(m2\_finseq\_1\ X0\ k5\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_1\ X1\ k5\_numbers) \Rightarrow (\forall X2.(m2\_finseq\_1\ X2\ k5\_numbers) \Rightarrow ((r2\_xboole\_0\ (k8\_finseq\_1\ k5\_numbers\ X0\ X1)\ (k8\_finseq\_1\ k5\_numbers\ X0\ X2)) \Rightarrow (r2\_xboole\_0\ X1\ X2))))$$