# t6_rewrite1 (TMXnPDF5ku4RNUn9zafYbm3e1rELkye8hEc)

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Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $m1\_rewrite1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $v1\_xboole\_0 : \iota \Rightarrow o$ be given. Let $k1\_xboole\_0 : \iota$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $k4\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k2\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_tarski : \iota \Rightarrow \iota$ be given. Let $np\_\_2 : \iota$ be given. Let $k2\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xreal\_0 : \iota \Rightarrow o$ be given. Let $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k6\_numbers : \iota$ be given. Let $k4\_ordinal1 : \iota$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_card\_1 : \iota \Rightarrow \iota$ be given. Let $v7\_ordinal1 : \iota \Rightarrow o$ be given. Let $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1\_xcmplx\_0 : \iota \Rightarrow o$ be given. Let $v1\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $v1\_finset\_1 : \iota \Rightarrow o$ be given. Let $v1\_card\_1 : \iota \Rightarrow o$ be given. Let $k4\_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1\_funct\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3\_xxreal\_0 : \iota \Rightarrow o$ be given. Let $v3\_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

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

Assume the following.

$$\forall X0.\forall X1.((v1\_relat\_1\ X1) \wedge ((v1\_funct\_1\ X1) \wedge (v1\_finseq\_1\ X1))) \Rightarrow ((X1 = k9\_finseq\_1\ X0) \Leftrightarrow ((k4\_finseq\_1\ X1 = k2\_finseq\_1\ np\_\_1) \wedge (k10\_xtuple\_0\ X1 = k1\_tarski\ X0))) \tag{2}$$

Assume the following.

$$(k2\_finseq\_1\ np\_\_1 = k1\_tarski\ np\_\_1) \wedge (k2\_finseq\_1\ np\_\_2 = k2\_tarski\ np\_\_1\ np\_\_2) \tag{3}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0) \Rightarrow (\forall X1.(v1\_xreal\_0\ X1) \Rightarrow (((r1\_xxreal\_0\ X0\ X1) \wedge (v2\_xxreal\_0\ X0)) \Rightarrow (v2\_xxreal\_0\ X1))) \tag{4}$$

Assume the following.

$$((v2\_xxreal\_0\ np\_\_1)\wedge(m2\_subset\_1\ np\_\_1\ k1\_numbers\ k5\_numbers))\wedge((m1\_subset\_1\ np\_\_1\ k5\_numbers)\wedge(m1\_subset\_1\ np\_\_1\ k1\_numbers)) \tag{5}$$

Assume the following.

$$k2\_xcmplx\_0\ np\_\_1\ np\_\_1 = np\_\_2 \tag{6}$$

Assume the following.

$$\forall X0.k9\_finseq\_1\ X0 = k5\_finseq\_1\ X0 \tag{7}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{8}$$

Assume the following.

$$k5\_numbers = k4\_ordinal1 \tag{9}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0)\wedge((v1\_funct\_1\ X0)\wedge(v1\_finseq\_1\ X0)))\Rightarrow(k3\_finseq\_1\ X0 = k1\_card\_1\ X0) \tag{10}$$

Assume the following.

$$\forall X0.\forall X1.((m1\_subset\_1\ X0\ k5\_numbers)\wedge(v7\_ordinal1\ X1))\Rightarrow(k2\_nat\_1\ X0\ X1 = k2\_xcmplx\_0\ X0\ X1) \tag{11}$$

Assume the following.

$$\exists X0.(v1\_xboole\_0\ X0)\wedge((v1\_xcmplx\_0\ X0)\wedge((v1\_xxreal\_0\ X0)\wedge(v1\_xreal\_0\ X0))) \tag{12}$$

Assume the following.

$$\forall X0.v1\_finseq\_1\ (k5\_finseq\_1\ X0) \tag{13}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ (k5\_finseq\_1\ X0))\wedge(v1\_funct\_1\ (k5\_finseq\_1\ X0)) \tag{14}$$

Assume the following.

$$\forall X0.(v1\_finset\_1\ X0)\Rightarrow((v1\_finset\_1\ (k1\_card\_1\ X0))\wedge(v1\_card\_1\ (k1\_card\_1\ X0))) \tag{15}$$

Assume the following.

$$\forall X0.(\neg v1\_xboole\_0\ X0)\Rightarrow((\neg v1\_xboole\_0\ (k1\_card\_1\ X0))\wedge (v1\_card\_1\ (k1\_card\_1\ X0))) \tag{16}$$

Assume the following.

$$\forall X0.\neg v1\_xboole\_0\ (k5\_finseq\_1\ X0) \tag{17}$$

Assume the following.

$$\forall X0.v1\_card\_1\ (k1\_card\_1\ X0) \tag{18}$$

Assume the following.

$$\forall X0.(v1\_relat\_1\ X0)\Rightarrow(\forall X1.((v1\_relat\_1\ X1)\wedge((v1\_funct\_1\ X1)\wedge(v1\_finseq\_1\ X1)))\Rightarrow((m1\_rewrite1\ X1\ X0)\Leftrightarrow((\neg r1\_xxreal\_0\ (k3\_finseq\_1\ X1)\ k6\_numbers)\wedge(\forall X2.(m1\_subset\_1\ X2\ k5\_numbers)\Rightarrow(((X2\in k4\_finseq\_1\ X1)\wedge(k2\_nat\_1\ X2\ np\_\_1\in k4\_finseq\_1\ X1))\Rightarrow(k4\_tarski\ (k1\_funct\_1\ X1\ X2)\ (k1\_funct\_1\ X1\ (k2\_nat\_1\ X2\ np\_\_1))\in X0)))))) \tag{19}$$

Assume the following.

$$\forall X0.\forall X1.(X1=k1\_tarski\ X0)\Leftrightarrow(\forall X2.(X2\in X1)\Leftrightarrow(X2=X0)) \tag{20}$$

Assume the following.

$$\forall X0.((v1\_xxreal\_0\ X0)\wedge((\neg v2\_xxreal\_0\ X0)\wedge(\neg v3\_xxreal\_0\ X0)))\Rightarrow((v1\_xboole\_0\ X0)\wedge(v1\_xxreal\_0\ X0)) \tag{21}$$

Assume the following.

$$\forall X0.(m1\_subset\_1\ X0\ k4\_ordinal1)\Rightarrow(v7\_ordinal1\ X0) \tag{22}$$

Assume the following.

$$\forall X0.((v3\_ordinal1\ X0)\wedge(v1\_finset\_1\ X0))\Rightarrow(v7\_ordinal1\ X0) \tag{23}$$

Assume the following.

$$\forall X0.(v1\_xreal\_0\ X0)\Rightarrow(v1\_xxreal\_0\ X0) \tag{24}$$

Assume the following.

$$\forall X0.((v1\_xxreal\_0\ X0)\wedge(v2\_xxreal\_0\ X0))\Rightarrow((\neg v1\_xboole\_0\ X0)\wedge((v1\_xxreal\_0\ X0)\wedge(\neg v3\_xxreal\_0\ X0))) \tag{25}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0)\Rightarrow((v7\_ordinal1\ X0)\wedge(\neg v3\_xxreal\_0\ X0)) \tag{26}$$

Assume the following.

$$\forall X0.(v7\_ordinal1\ X0) \Rightarrow (v1\_xreal\_0\ X0) \tag{27}$$

Assume the following.

$$\begin{array}{c} \forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow \\ ((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finset\_1\ X0))) \end{array} \tag{28}$$

Assume the following.

$$\forall X0.(v1\_card\_1\ X0) \Rightarrow (v3\_ordinal1\ X0) \tag{29}$$

**Theorem 1**

$$\begin{array}{c} \forall X0.(v1\_relat\_1\ X0) \Rightarrow (\forall X1.m1\_rewrite1\ (k9\_finseq\_1 \\ X1)\ X0) \end{array}$$