

t13_nat_1 (TMTWQghABSjk- iFu76HtSzUYLETxZR77gbFt)

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Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k4_ordinal1 : \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1\ X0) \Rightarrow (\forall X1.(v7_ordinal1\ X1) \Rightarrow (\neg \\ (r1_xxreal_0\ X0\ (k1_nat_1\ X1\ np_1)) \wedge (\neg r1_xxreal_0\ X0\ X1) \wedge (X0 \neq \\ k1_nat_1\ X1\ np_1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xxreal_0\ X0) \Rightarrow (\forall X1.(v1_xxreal_0\ X1) \Rightarrow (\forall X2. \\ (v1_xxreal_0\ X2) \Rightarrow (((r1_xxreal_0\ X0\ X1) \wedge (r1_xxreal_0\ X1\ X2)) \Rightarrow \\ (r1_xxreal_0\ X0\ X2)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0\ X0) \Rightarrow (\forall X1.(v1_xreal_0\ X1) \Rightarrow (\neg (r1_xxreal_0 \\ X0\ X1) \wedge (r1_xxreal_0\ (k2_xcmplx_0\ X1\ np_1)\ X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} ((v2_xxreal_0\ np_1) \wedge (m2_subset_1\ np_1\ k1_numbers\ k5_numbers)) \wedge \\ ((m1_subset_1\ np_1\ k5_numbers) \wedge (m1_subset_1\ np_1\ k1_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1_xxreal_0\ X0) \wedge (v1_xxreal_0\ X1)) \Rightarrow (\\ r1_xxreal_0\ X0\ X0) \end{aligned} \quad (5)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(m1_subset_1\ X1\ k5_numbers))\Rightarrow (k1_nat_1\ X0\ X1 = k2_xcmplx_0\ X0\ X1) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.((v7_ordinal1\ X0)\wedge(v7_ordinal1\ X1))\Rightarrow(v7_ordinal1\ (k2_xcmplx_0\ X0\ X1)) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xxreal_0\ X0)\wedge(v1_xxreal_0\ X1))\Rightarrow((r1_xxreal_0\ X0\ X1)\vee(r1_xxreal_0\ X1\ X0)) \quad (9)$$

Assume the following.

$$\forall X0.(m1_subset_1\ X0\ k4_ordinal1)\Rightarrow(v7_ordinal1\ X0) \quad (10)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xxreal_0\ X0) \quad (11)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(v1_xxreal_0\ X0) \quad (12)$$

Theorem 1

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow(\forall X1.(v7_ordinal1\ X1)\Rightarrow((\neg r1_xxreal_0\ (k1_nat_1\ X1\ np_1)\ X0)\Leftrightarrow(r1_xxreal_0\ X0\ X1)))$$