

t31_valued_1 (TMbY-
brFBL81Qm4FrMERV7BUwoBtNPhNeoN4)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k62_valued_1 : \iota \Rightarrow \iota$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $k1_xxreal_2 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v4_membered : \iota \Rightarrow o$ be given. Let $v5_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow (\forall X1.(v2_membered X1) \Rightarrow ((r1_tarski X0 X1) \Rightarrow (r1_xxreal_0 (k1_xxreal_2 X0) (k1_xxreal_2 X1)))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(v1_relat_1 X1) \Rightarrow ((r1_tarski X0 X1) \Rightarrow ((r1_tarski (k9_xtuple_0 X0) (k9_xtuple_0 X1)) \wedge (r1_tarski (k10_xtuple_0 X0) (k10_xtuple_0 X1)))))) \quad (2)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (3)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v4_relat_1 X0 k5_numbers)) \Rightarrow (v6_membered (k9_xtuple_0 X0)) \quad (4)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((\neg v1_xboole_0 X0) \wedge (v1_finset_1 X0)))))) \Rightarrow (k62_valued_1 X0 = k1_xxreal_2 (k1_relset_1 k5_numbers X0)) \quad (5)$$

Assume the following.

$$\forall X0.(v3_membered\ X0)\Rightarrow(v2_membered\ X0) \quad (6)$$

Assume the following.

$$\forall X0.(v4_membered\ X0)\Rightarrow(v3_membered\ X0) \quad (7)$$

Assume the following.

$$\forall X0.(v5_membered\ X0)\Rightarrow(v4_membered\ X0) \quad (8)$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(v5_membered\ X0) \quad (9)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_relat_1\ X0)\wedge((v4_relat_1\ X0\ k5_numbers)\wedge((v1_funct_1 \\ X0)\wedge((\neg v1_xboole_0\ X0)\wedge(v1_finset_1\ X0))))))\Rightarrow(\forall X1.((\\ v1_relat_1\ X1)\wedge((v4_relat_1\ X1\ k5_numbers)\wedge((v1_funct_1\ X1)\wedge \\ ((\neg v1_xboole_0\ X1)\wedge(v1_finset_1\ X1))))))\Rightarrow((r1_tarski\ X0\ X1)\Rightarrow \\ (r1_xxreal_0\ (k62_valued_1\ X0)\ (k62_valued_1\ X1)))) \end{aligned}$$