

t6_rewrite2

(TMSi1cNw4S9yNsHNJ2srwS6ycZngm3TXfVw)

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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 $v1_rewrite2 : \iota \Rightarrow o$ be given. Let $k1_rewrite2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_flang_1 : \iota \Rightarrow \iota$ be given. Let $k2_rewrite2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_afinsq_1 : \iota \Rightarrow \iota$ be given. Let $v5_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_finset_1 : \iota \Rightarrow o$ be given. Let $k1_ordinal4 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (1)$$

Assume the following.

$$\forall X0.k2_flang_1 X0 = k4_afinsq_1 X0 \quad (2)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v5_ordinal1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0)))) \Rightarrow (k1_ordinal4 k1_xboole_0 X0 = X0) \quad (3)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge ((v5_ordinal1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_finset_1 X0)))) \Rightarrow (k1_ordinal4 X0 k1_xboole_0 = X0) \quad (4)$$

Assume the following.

$$\forall X0.(v1_relat_1 (k4_afinsq_1 X0)) \wedge ((v5_relat_1 (k4_afinsq_1 X0) X0) \wedge ((v5_ordinal1 (k4_afinsq_1 X0)) \wedge ((v1_funct_1 (k4_afinsq_1 X0)) \wedge ((v1_xboole_0 (k4_afinsq_1 X0)) \wedge (v1_finset_1 (k4_afinsq_1 X0))))))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0) \wedge ((v1_funct_1 X0) \wedge (v1_rewrite2 X0))) \Rightarrow (v5_ordinal1 (k1_funct_1 X0 X1)) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_rewrite2 X0)))\Rightarrow((v1_relat_1 (k1_funct_1 X0 X1))\wedge((v1_funct_1 (k1_funct_1 X0 X1))\wedge(v1_finset_1 (k1_funct_1 X0 X1)))) \quad (7)$$

Assume the following.

$$\forall X0.((v5_ordinal1 X0)\wedge((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finset_1 X0))))\Rightarrow(\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_rewrite2 X1))))\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge((v1_funct_1 X2)\wedge(v1_rewrite2 X2))))\Rightarrow((X2 = k2_rewrite2 X0 X1)\Leftrightarrow((k9_xtuple_0 X2 = k9_xtuple_0 X1)\wedge(\forall X3.(X3 \in k9_xtuple_0 X1)\Rightarrow(k1_funct_1 X2 X3 = k1_ordinal4 (k1_funct_1 X1 X3) X0)))) \quad (8)$$

Assume the following.

$$\forall X0.((v5_ordinal1 X0)\wedge((v1_relat_1 X0)\wedge((v1_funct_1 X0)\wedge(v1_finset_1 X0))))\Rightarrow(\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge(v1_rewrite2 X1))))\Rightarrow(\forall X2.((v1_relat_1 X2)\wedge((v1_funct_1 X2)\wedge(v1_rewrite2 X2))))\Rightarrow((X2 = k1_rewrite2 X0 X1)\Leftrightarrow((k9_xtuple_0 X2 = k9_xtuple_0 X1)\wedge(\forall X3.(X3 \in k9_xtuple_0 X1)\Rightarrow(k1_funct_1 X2 X3 = k1_ordinal4 X0 (k1_funct_1 X1 X3)))))) \quad (9)$$

Theorem 1

$$\forall X0.\forall X1.((v1_relat_1 X1)\wedge((v1_funct_1 X1)\wedge((v1_finseq_1 X1)\wedge(v1_rewrite2 X1))))\Rightarrow((k1_rewrite2 (k2_flang_1 X0) X1 = X1)\wedge(k2_rewrite2 (k2_flang_1 X0) X1 = X1))$$