

t73_chord

(TMW8v17PvPGKVqZcE8bcRyoskhDJvqgm6Zt)

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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 $v1_finset_1 : \iota \Rightarrow o$ be given. Let $v1_glib_000 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_glib_000 : \iota \Rightarrow \iota$ be given. Let $r1_chord : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_chord : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $m3_glib_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v1_abian : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (k6_glib_000 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k6_glib_000 \\ & X0)) \Rightarrow (\neg(X1 \neq X2) \wedge ((\neg r1_chord X0 X1 X2) \wedge (\exists X3.(m2_chord X3 \\ & X0 X1 X2) \wedge (\exists X4.(m3_glib_001 X4 X0) \wedge ((r1_glib_001 X0 X1 X2 \\ & X4) \wedge (\forall X5.((v7_ordinal1 X5) \wedge (\neg v1_abian X5)) \Rightarrow (\neg(\neg r1_xxreal_0 \\ & X5 np_1) \wedge ((\neg r1_xxreal_0 (k3_finseq_1 X4) X5) \wedge (k1_funct_1 X4 \\ & X5 \in X3)))))))))))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m3_glib_001 \\ & X1 X0) \Rightarrow (\forall X2. \forall X3.(r1_glib_001 X0 X2 X3 X1) \Rightarrow ((m1_subset_1 \\ & X2 (k6_glib_000 X0)) \wedge (m1_subset_1 X3 (k6_glib_000 X0)))))) \end{aligned} \quad (2)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (3)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Leftrightarrow (\forall X1. \neg X1 \in X0) \quad (4)$$

Theorem 1

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (k6_glib_000 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k6_glib_000 \\ X0)) \Rightarrow (\neg(X1 \neq X2) \wedge ((\neg r1_chord X0 X1 X2) \wedge (\exists X3.(m2_chord X3 \\ X0 X1 X2) \wedge ((X3 = k1_xboole_0) \wedge (\exists X4.(m3_glib_001 X4 X0) \wedge \\ (r1_glib_001 X0 X1 X2 X4)))))))))) \end{aligned}$$