

t86_chord

(TMVCKC7ZU3q2MEfxyzmT3xZgCpnwN15FEkW)

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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 $r5_glib_000 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m3_glib_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_chord : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_glib_000 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k14_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k3_finseq_1 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.((v1_relat_1 \\ X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v1_funct_1 X1) \wedge ((v1_finset_1 \\ X1) \wedge (v1_glib_000 X1)))))) \Rightarrow ((r5_glib_000 X0 X1) \Leftrightarrow ((m1_glib_000 \\ X0 X1) \wedge (m1_glib_000 X1 X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.((v1_relat_1 \\ X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v1_funct_1 X1) \wedge ((v1_finset_1 \\ X1) \wedge (v1_glib_000 X1)))))) \Rightarrow (\forall X2.(m3_glib_001 X2 X0) \Rightarrow (\forall X3. \\ (m3_glib_001 X3 X1) \Rightarrow ((X2 = X3) \Rightarrow (k14_glib_001 X0 X2 = k14_glib_001 \\ X1 X3)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m1_glib_000 \\ X1 X0) \Rightarrow (\forall X2. \forall X3. \forall X4.(r1_glib_000 X1 X2 X3 \\ X4) \Rightarrow (r1_glib_000 X0 X2 X3 X4))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\
& X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m3_glib_001 \\
& X1 X0) \Rightarrow ((v5_chord X1 X0) \Leftrightarrow (\exists X2.((v7_ordinal1 X2) \wedge (\neg v1_abian \\
& X2)) \wedge (\exists X3.((v7_ordinal1 X3) \wedge (\neg v1_abian X3)) \wedge ((\neg r1_xxreal_0 \\
& X3 (k1_nat_1 X2 np_2)) \wedge ((r1_xxreal_0 X3 (k3_finseq_1 X1)) \wedge ((\\
& k1_funct_1 X1 X2 \neq k1_funct_1 X1 X3) \wedge ((\exists X4.r1_glib_000 X0 \\
& (k1_funct_1 X1 X2) (k1_funct_1 X1 X3) X4) \wedge (\forall X4. \neg (X4 \in k14_glib_001 \\
& X0 X1) \wedge (r1_glib_000 X0 (k1_funct_1 X1 X2) (k1_funct_1 X1 X3) X4)))))))))) \\
& \hspace{15em} (4)
\end{aligned}$$

Theorem 1

$$\begin{aligned}
& \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\
& X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.((v1_relat_1 \\
& X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v1_funct_1 X1) \wedge ((v1_finset_1 \\
& X1) \wedge (v1_glib_000 X1)))))) \Rightarrow ((r5_glib_000 X0 X1) \Rightarrow (\forall X2.(\\
& m3_glib_001 X2 X0) \Rightarrow (\forall X3.(m3_glib_001 X3 X1) \Rightarrow (((X2 = X3) \wedge \\
& (v5_chord X2 X0)) \Rightarrow (v5_chord X3 X1))))))
\end{aligned}$$