

t70_chord (TMKgZW- Bgk98KbtNzB4M1VLtyqqHyHeW1VVs)

October 27, 2020

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 $m3_glib_001 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_glib_001 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_glib_000 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k6_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k21_glib_000 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m3_glib_001 \\ X1 X0) \Rightarrow (\forall X2.\forall X3.(r1_glib_001 X0 X2 X3 X1) \Leftrightarrow (r1_glib_001 \\ X0 X3 X2 (k6_glib_001 X0 X1)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((v1_relat_1 X0) \wedge ((v4_relat_1 \\ X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 \\ X0)))))) \wedge ((m1_subset_1 X1 (k6_glib_000 X0)) \wedge (m1_subset_1 X2 (\\ k6_glib_000 X0))) \Rightarrow ((r1_chord X0 X1 X2) \Rightarrow (r1_chord X0 X2 X1)) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v1_relat_1 X0) \wedge ((v4_relat_1 \\ X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 \\ X0)))))) \Rightarrow (\forall X3.(m2_glib_000 X3 X0 X1 X2) \Rightarrow (m1_glib_000 X3 \\ X0)) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((v1_relat_1 X0) \wedge ((v4_relat_1 \\ X0 k5_numbers) \wedge ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 \\ X0)))))) \wedge ((m1_subset_1 X1 (k6_glib_000 X0)) \wedge (m1_subset_1 X2 (\\ k6_glib_000 X0))) \Rightarrow (\forall X3.(m2_chord X3 X0 X1 X2) \Rightarrow (m1_subset_1 \\ X3 (k1_zfmisc_1 (k6_glib_000 X0)))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m1_glib_000 \\ X1 X0) \Rightarrow ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 k5_numbers) \wedge ((v1_funct_1 \\ X1) \wedge ((v1_finset_1 X1) \wedge (v1_glib_000 X1)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. (((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge \\ ((v1_funct_1 X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \wedge (m3_glib_001 \\ X1 X0)) \Rightarrow (m3_glib_001 (k6_glib_001 X0 X1) X0) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ X1 (k6_glib_000 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k6_glib_000 \\ X0)) \Rightarrow (\neg(X1 \neq X2) \wedge ((\neg r1_chord X0 X1 X2) \wedge (\neg \forall X3.(m1_subset_1 \\ X3 (k1_zfmisc_1 (k6_glib_000 X0))) \Rightarrow ((m2_chord X3 X0 X1 X2) \Leftrightarrow ((\neg \\ X1 \in X3) \wedge ((\neg X2 \in X3) \wedge (\forall X4.(m2_glib_000 X4 X0 (k6_subset_1 \\ (k6_glib_000 X0) X3) (k21_glib_000 X0 (k6_subset_1 (k6_glib_000 \\ X0) X3))) \Rightarrow (\forall X5.(m3_glib_001 X5 X4) \Rightarrow (\neg r1_glib_001 X4 X1 \\ X2 X5)))))))))) \end{aligned} \quad (7)$$

Theorem 1

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