

t52_chord

(TMGcc9eXwwejAG4x9FS915cXCHnneSzfBPX)

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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 $k2_chord : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_domain_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_chord : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & \quad X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1. \forall X2. \\ & (m1_subset_1 X2 (k6_glib_000 X0)) \Rightarrow ((X2 \in k2_chord X0 X1) \Leftrightarrow ((\neg X2 \in \\ & \quad X1) \wedge (\exists X3. (m1_subset_1 X3 (k6_glib_000 X0)) \wedge ((X3 \in X1) \wedge \\ & \quad (r1_chord X0 X2 X3)))))) \end{aligned} \tag{1}$$

Assume the following.

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

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((\neg v1_xboole_0 X0) \wedge (m1_subset_1 X1 X0)) \Rightarrow \\ & \quad (k6_domain_1 X0 X1 = k1_tarski X1) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_relat_1 X0) \wedge ((v4_relat_1 X0 k5_numbers) \wedge ((v1_funct_1 \\ & \quad X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\neg v1_xboole_0 (\\ & \quad k6_glib_000 X0)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (X1 = k1_tarski X0) \Leftrightarrow (\forall X2. (X2 \in X1) \Leftrightarrow \\ & \quad (X2 = X0)) \end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_relat_1 X0) \wedge ((v4_relat_1 X0 \ k5_numbers) \wedge ((v1_funct_1 \\ & X0) \wedge ((v1_finset_1 X0) \wedge (v1_glib_000 X0)))))) \Rightarrow (\forall X1.(m1_subset_1 \\ & X1 (k6_glib_000 X0)) \Rightarrow (\forall X2.(m1_subset_1 X2 (k6_glib_000 \\ X0)) \Rightarrow ((X1 \in k2_chord X0 (k6_domain_1 (k6_glib_000 X0) X2)) \Leftrightarrow ((X1 \neq \\ & X2) \wedge (r1_chord X0 X2 X1)))))) \end{aligned}$$