

t18_zfmodel1

(TMHySCpVR2AKAKMBWAmuFwaSG3TwjX4h6wm)

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Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v1_ordinal1 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_tarski : \iota \Rightarrow \iota$ be given. Let $k3_xboole_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $v1_zf_lang : \iota \Rightarrow o$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zf_lang : \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_zf_lang : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $np_1 : \iota$ be given. Let $np_2 : \iota$ be given. Let $k2_zf_model : \iota \Rightarrow \iota$ be given. Let $r1_zf_model : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $k13_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_4 : \iota$ be given. Let $k12_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_zf_lang : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_zfmodel1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $r2_xboole_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v1_zf_model : \iota \Rightarrow o$ be given. Let $r2_zf_model : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_zf_model : \iota$ be given. Let $k9_zf_model : \iota$ be given. Let $k8_zf_model : \iota$ be given. Let $k7_zf_model : \iota$ be given. Let $k11_zf_model : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow ((v1_ordinal1 X0) \Rightarrow ((r2_zf_model \\ X0 k10_zf_model) \Leftrightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow (k3_xboole_0 \\ X0 (k1_zfmisc_1 X1) \in X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow ((v1_ordinal1 X0) \Rightarrow ((r2_zf_model \\ X0 k9_zf_model) \Leftrightarrow (\exists X1. (m1_subset_1 X1 X0) \wedge ((X1 \neq k1_xboole_0) \wedge \\ (\forall X2. (m1_subset_1 X2 X0) \Rightarrow (\neg (X2 \in X1) \wedge (\forall X3. (m1_subset_1 \\ X3 X0) \Rightarrow (\neg (r2_xboole_0 X2 X3) \wedge (X3 \in X1)))))))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0. (\neg v1_xboole_0 X0) \Rightarrow ((v1_ordinal1 X0) \Rightarrow ((r2_zf_model \\ X0 k8_zf_model) \Leftrightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow (k3_tarski X1 \in \\ X0)))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow ((v1_ordinal1 X0) \Rightarrow ((r2_zf_model \\ X0 k7_zf_model) \Leftrightarrow (\forall X1.(m1_subset_1 X1 X0) \Rightarrow (\forall X2. \\ (m1_subset_1 X2 X0) \Rightarrow (k2_tarski X1 X2 \in X0)))))) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow ((v1_ordinal1 X0) \Rightarrow ((\forall X1. \\ ((v1_zf_lang X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow ((r1_xboole_0 \\ (k1_enumset1 (k2_zf_lang k6_numbers) (k2_zf_lang np_1) (k2_zf_lang \\ np_2)) (k2_zf_model X1)) \Rightarrow (r2_zf_model X0 (k11_zf_model X1)))) \Leftrightarrow \\ (\forall X1.((v1_zf_lang X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\ \forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k1_zf_lang X0) \wedge (\\ m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_zf_lang X0)))))) \Rightarrow \\ (((r1_xboole_0 (k1_enumset1 (k2_zf_lang k6_numbers) (k2_zf_lang \\ np_1) (k2_zf_lang np_2)) (k2_zf_model X1)) \wedge (r1_zf_model X0 \\ X2 (k8_zf_lang (k2_zf_lang np_3) (k13_zf_lang (k2_zf_lang k6_numbers) \\ (k8_zf_lang (k2_zf_lang np_4) (k12_zf_lang X1 (k4_zf_lang (k2_zf_lang \\ np_4) (k2_zf_lang k6_numbers)))))))))) \Rightarrow (\forall X3.(m1_subset_1 \\ X3 X0) \Rightarrow (k7_relset_1 X0 X0 (k1_zfmodel1 X1 X0 X2) X3 \in X0)))))) \end{aligned} \quad (5)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(\neg v1_xboole_0 X0) \Rightarrow ((v1_zf_model X0) \Leftrightarrow ((v1_ordinal1 \\ X0) \wedge ((r2_zf_model X0 k7_zf_model) \wedge ((r2_zf_model X0 k8_zf_model) \wedge \\ ((r2_zf_model X0 k9_zf_model) \wedge ((r2_zf_model X0 k10_zf_model) \wedge \\ (\forall X1.((v1_zf_lang X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow (\\ (r1_xboole_0 (k1_enumset1 (k2_zf_lang k6_numbers) (k2_zf_lang \\ np_1) (k2_zf_lang np_2)) (k2_zf_model X1)) \Rightarrow (r2_zf_model X0 \\ (k11_zf_model X1)))))))))) \end{aligned} \quad (7)$$

Theorem 1

$$\begin{aligned} & \forall X0.(\neg v1_xboole_0 X0) \Rightarrow (((v1_ordinal1 X0) \wedge ((\forall X1. \\ & (m1_subset_1 X1 X0) \Rightarrow (\forall X2.(m1_subset_1 X2 X0) \Rightarrow (k2_tarski \\ & X1 X2 \in X0)))) \wedge ((\forall X1.(m1_subset_1 X1 X0) \Rightarrow (k3_tarski X1 \in X0)) \wedge \\ & ((\forall X1.(m1_subset_1 X1 X0) \Rightarrow (k3_xboole_0 X0 (k1_zf_misc_1 \\ & X1) \in X0)) \wedge (\forall X1.((v1_zf_lang X1) \wedge (m2_finseq_1 X1 k5_numbers)) \Rightarrow \\ & (\forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k1_zf_lang X0) \wedge \\ & (m1_subset_1 X2 (k1_zf_misc_1 (k2_zf_misc_1 k1_zf_lang X0)))))) \Rightarrow \\ & (((r1_xboole_0 (k1_enumset1 (k2_zf_lang k6_numbers) (k2_zf_lang \\ & np_1) (k2_zf_lang np_2)) (k2_zf_model X1)) \wedge (r1_zf_model X0 \\ & X2 (k8_zf_lang (k2_zf_lang np_3) (k13_zf_lang (k2_zf_lang k6_numbers) \\ & (k8_zf_lang (k2_zf_lang np_4) (k12_zf_lang X1 (k4_zf_lang (k2_zf_lang \\ & np_4) (k2_zf_lang k6_numbers)))))))))) \Rightarrow (\forall X3.(m1_subset_1 \\ & X3 X0) \Rightarrow (k7_relset_1 X0 X0 (k1_zf_model1 X1 X0 X2) X3 \in X0)))))) \Rightarrow \\ & ((\forall X1.(m1_subset_1 X1 X0) \Rightarrow (\neg(X1 \neq k1_xboole_0) \wedge (\forall X2. \\ & (m1_subset_1 X2 X0) \Rightarrow (\neg(X2 \in X1) \wedge (\forall X3.(m1_subset_1 X3 X0) \Rightarrow \\ & (\neg(r2_xboole_0 X2 X3) \wedge (X3 \in X1)))))) \vee (v1_zf_model X0))) \end{aligned}$$