

t20_closure2
(TMKuZ3XRu2YFdMx56WFS1Et7svrsbobGeRF)

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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 $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_closure2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_closure2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k3_closure2 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k1_pboole : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v1_funct_1 X1)) \Rightarrow (\forall X2. \\ & ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((X0 \in k9_xtuple_0 (k3_closure2 \\ & (k2_tarski X1 X2))) \Rightarrow (k1_funct_1 (k3_closure2 (k2_tarski X1 X2)) \\ & X0 = k2_tarski (k1_funct_1 X1 X0) (k1_funct_1 X2 X0)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 X0) \wedge \\ & (v1_funct_1 X1) \wedge (v1_partfun1 X1 X0))) \Rightarrow (\forall X2. ((\neg v1_xboole_0 \\ & X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k1_closure2 X0 X1)))) \Rightarrow (k9_xtuple_0 \\ & (k3_closure2 X2) = X0)) \end{aligned} \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \neg v1_xboole_0 (k2_tarski X0 X1) \quad (3)$$

Assume the following.

$$v1_xboole_0 k1_xboole_0 \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 X0) \wedge \\ & (v1_funct_1 X1) \wedge (v1_partfun1 X1 X0))) \Rightarrow (\forall X2. (m1_subset_1 \\ & X2 (k1_zfmisc_1 (k1_closure2 X0 X1))) \Rightarrow (((X2 \neq k1_xboole_0) \Rightarrow (k4_closure2 \\ & X0 X1 X2 = k3_closure2 X2)) \wedge ((X2 = k1_xboole_0) \Rightarrow (k4_closure2 X0 \\ & X1 X2 = k1_pboole X0)))) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.k2_tarSKI X0 X1 = k2_tarSKI X1 X0 \quad (6)$$

Theorem 1

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v1_relat_1 X2)\wedge((v4_relat_1 \\ & X2 X1)\wedge((v1_funct_1 X2)\wedge(v1_partfun1 X2 X1))))\Rightarrow(\forall X3.(\\ & (v1_relat_1 X3)\wedge(v1_funct_1 X3))\Rightarrow(\forall X4.((v1_relat_1 X4)\wedge \\ & (v1_funct_1 X4))\Rightarrow(\forall X5.(m1_subset_1 X5 (k1_zfmisc_1 (k1_closure2 \\ & X1 X2))\Rightarrow(((X0 \in X1)\wedge(X5 = k2_tarSKI X3 X4))\Rightarrow(k1_funct_1 (k4_closure2 \\ & X1 X2 X5) X0 = k2_tarSKI (k1_funct_1 X3 X0) (k1_funct_1 X4 X0)))))) \end{aligned}$$