

t2_closure3

(TMdri1pATwwA8dgx1XSgpxZqbATjPoFiz9B)

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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 $r2_pboole : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_mssubfam : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_closure2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m3_pboole : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_mboolean : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_pboole : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 X0) \wedge \\ & (v1_funct_1 X1) \wedge (v1_partfun1 X1 X0))) \Rightarrow (\forall X2. ((v1_relat_1 \\ X2) \wedge ((v4_relat_1 X2 X0) \wedge ((v1_funct_1 X2) \wedge (v1_partfun1 X2 X0)))) \Rightarrow \\ & (\forall X3. (m3_pboole X3 X0 (k1_mboolean X0 X1)) \Rightarrow ((r1_pboole \\ X0 X2 X3) \Rightarrow (r2_pboole X0 (k4_mssubfam X0 X1 X3) X2)))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 X0) \wedge \\ & (v1_funct_1 X1) \wedge (v1_partfun1 X1 X0))) \Rightarrow (\forall X2. ((v1_relat_1 \\ X2) \wedge ((v4_relat_1 X2 X0) \wedge ((v1_funct_1 X2) \wedge (v1_partfun1 X2 X0)))) \Rightarrow \\ & (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 (k1_closure2 X0 X1))) \Rightarrow \\ & ((X2 \in X3) \Rightarrow (r1_pboole X0 X2 (k5_closure2 X0 X1 X3)))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v1_relat_1 X1) \wedge ((v4_relat_1 \\ X1 X0) \wedge ((v1_funct_1 X1) \wedge (v1_partfun1 X1 X0)))) \wedge (m1_subset_1 \\ X2 (k1_zfmisc_1 (k1_closure2 X0 X1)))) \Rightarrow (m3_pboole (k5_closure2 \\ X0 X1 X2) X0 (k1_mboolean X0 X1)) \end{aligned} \quad (3)$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. ((v1_relat_1 X1) \wedge ((v4_relat_1 X1 X0) \wedge \\ & (v1_funct_1 X1) \wedge (v1_partfun1 X1 X0))) \Rightarrow (\forall X2. ((v1_relat_1 \\ & X2) \wedge ((v4_relat_1 X2 X0) \wedge ((v1_funct_1 X2) \wedge (v1_partfun1 X2 X0)))) \Rightarrow \\ & (\forall X3. (m1_subset_1 X3 (k1_zfmisc_1 (k1_closure2 X0 X1))) \Rightarrow \\ & ((X2 \in X3) \Rightarrow (r2_pboole X0 (k4_mssubfam X0 X1 (k5_closure2 X0 X1 X3)) \\ & X2)))) \end{aligned}$$