

t15_funct_6

(TMaApK1SXuwa4FK8zh7VAWNHf8tvE4oMYhE)

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Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $k4_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_funct_5 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_funct_5 : \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((r1_tarski X0 X1) \wedge (r1_tarski X2 X3)) \Rightarrow (r1_tarski (k2_zfmisc_1 X0 X2) (k2_zfmisc_1 X1 X3)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((r1_tarski (k10_xtuple_0 X2) (k4_partfun1 X0 X1)) \Rightarrow ((r1_tarski (k10_xtuple_0 (k2_funct_5 X2)) X1) \wedge (r1_tarski (k10_xtuple_0 (k4_funct_5 X2)) X1))) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((r1_tarski (k10_xtuple_0 X2) (k4_partfun1 X0 X1)) \Rightarrow ((r1_tarski (k9_xtuple_0 (k2_funct_5 X2)) (k2_zfmisc_1 (k9_xtuple_0 X2) X0)) \wedge (r1_tarski (k9_xtuple_0 (k4_funct_5 X2)) (k2_zfmisc_1 X0 (k9_xtuple_0 X2))))) \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((r1_tarski X0 X1) \wedge (r1_tarski X1 X2)) \Rightarrow (r1_tarski X0 X2) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. r1_tarski X0 X0 \quad (5)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v1_relat_1 (k4_funct_5 X0)) \wedge (v1_funct_1 (k4_funct_5 X0))) \quad (6)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((v1_relat_1 (k2_funct_5 X0)) \wedge (v1_funct_1 (k2_funct_5 X0))) \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (X2 = k4_partfun1 X0 X1) \Leftrightarrow (\forall X3. \\ & (X3 \in X2) \Leftrightarrow (\exists X4. ((v1_relat_1 X4) \wedge (v1_funct_1 X4)) \wedge ((X3 = \\ & X4) \wedge ((r1_tarski (k9_xtuple_0 X4) X0) \wedge (r1_tarski (k10_xtuple_0 \\ & X4) X1)))))) \quad (8) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_relat_1 X3) \wedge \\ & (v1_funct_1 X3)) \Rightarrow ((X3 \in k4_partfun1 X0 (k4_partfun1 X1 X2)) \Rightarrow ((\\ & k2_funct_5 X3 \in k4_partfun1 (k2_zfmisc_1 X0 X1) X2) \wedge (k4_funct_5 \\ & X3 \in k4_partfun1 (k2_zfmisc_1 X1 X0) X2))) \end{aligned}$$