

t14_funct_6 (TMGKnM-
LkZ3V619ZjaeKTZjXwU8H2XYB5yZp)

October 27, 2020

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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_funct_5 : \iota \Rightarrow \iota$ be given. Let $k3_funct_5 : \iota \Rightarrow \iota$ 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.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Rightarrow (r1_tarski (k10_xtuple_0 X0) (k10_xtuple_0 X1)) \quad (1)$$

Assume the following.

$$\forall X0. \forall X1. (r1_tarski X0 X1) \Rightarrow (r1_tarski (k9_xtuple_0 X0) (k9_xtuple_0 X1)) \quad (2)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. \forall X3. ((r1_tarski X0 X1) \wedge (r1_tarski X2 X3)) \Rightarrow (r1_tarski (k4_partfun1 X0 X2) (k4_partfun1 X1 X3)) \quad (3)$$

Assume the following.

$$\forall X0. ((v1_relat_1 X0) \wedge (v1_funct_1 X0)) \Rightarrow ((r1_tarski (k10_xtuple_0 (k1_funct_5 X0)) (k4_partfun1 (k10_xtuple_0 (k9_xtuple_0 X0)) (k10_xtuple_0 X0))) \wedge (r1_tarski (k10_xtuple_0 (k3_funct_5 X0)) (k4_partfun1 (k9_xtuple_0 (k9_xtuple_0 X0)) (k10_xtuple_0 X0)))) \quad (4)$$

Assume the following.

$$\forall X0. \forall X1. \forall X2. ((v1_relat_1 X2) \wedge (v1_funct_1 X2)) \Rightarrow ((r1_tarski (k9_xtuple_0 X2) (k2_zfmisc_1 X0 X1)) \Rightarrow ((r1_tarski (k9_xtuple_0 (k1_funct_5 X2)) X0) \wedge (r1_tarski (k9_xtuple_0 (k3_funct_5 X2)) X1))) \quad (5)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((r1_tarSKI X0 X1)\wedge(r1_tarSKI X1 X2))\Rightarrow(r1_tarSKI X0 X2) \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.(r1_tarSKI (k9_xtuple_0 (k2_zfmisc_1 X0 X1)) X0)\wedge(r1_tarSKI (k10_xtuple_0 (k2_zfmisc_1 X0 X1)) X1) \quad (7)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow((v1_relat_1 (k3_funct_5 X0))\wedge(v1_funct_1 (k3_funct_5 X0))) \quad (8)$$

Assume the following.

$$\forall X0.((v1_relat_1 X0)\wedge(v1_funct_1 X0))\Rightarrow((v1_relat_1 (k1_funct_5 X0))\wedge(v1_funct_1 (k1_funct_5 X0))) \quad (9)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(X2 = k4_partfun1 X0 X1)\Leftrightarrow(\forall X3.(X3 \in X2)\Leftrightarrow(\exists X4.((v1_relat_1 X4)\wedge(v1_funct_1 X4))\wedge((X3 = X4)\wedge((r1_tarSKI (k9_xtuple_0 X4) X0)\wedge(r1_tarSKI (k10_xtuple_0 X4) X1)))))) \quad (10)$$

Theorem 1

$$\forall X0.\forall X1.\forall X2.\forall X3.((v1_relat_1 X3)\wedge(v1_funct_1 X3))\Rightarrow((X3 \in k4_partfun1 (k2_zfmisc_1 X0 X1) X2)\Rightarrow((k1_funct_5 X3 \in k4_partfun1 X0 (k4_partfun1 X1 X2))\wedge(k3_funct_5 X3 \in k4_partfun1 X1 (k4_partfun1 X0 X2))))$$