

l34_int_4

(TMJzudkexHnaaw3cjbUDLophmHJjZfn5RdM)

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Let $v1_int_1 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_int_4 : \iota \Rightarrow \iota$ be given. Let $k4_numbers : \iota$ be given. Let $v3_relat_2 : \iota \Rightarrow o$ be given. Let $v8_relat_2 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_int_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relat_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $r8_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_tarski : \iota \Rightarrow \iota$ be given. Let $r3_relat_2 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_int_1 X0) \Rightarrow (\forall X1. (v1_int_1 X1) \Rightarrow (\forall X2. \\ & (v1_int_1 X2) \Rightarrow (\forall X3. (v1_int_1 X3) \Rightarrow (((r2_int_1 X0 X1 X2) \wedge \\ & (r2_int_1 X1 X3 X2)) \Rightarrow (r2_int_1 X0 X3 X2)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_int_1 X0) \Rightarrow (\forall X1. (v1_int_1 X1) \Rightarrow (\forall X2. \\ & (v1_int_1 X2) \Rightarrow ((r2_int_1 X0 X1 X2) \Rightarrow (r2_int_1 X1 X0 X2)))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_partfun1 X1 X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 X0)))) \Rightarrow (k1_relat_1 X1 = X0) \quad (4)$$

Assume the following.

$$\forall X0. (v1_int_1 X0) \Rightarrow (v1_partfun1 (k1_int_4 X0) k4_numbers) \quad (5)$$

Assume the following.

$$\forall X0. (v1_int_1 X0) \Rightarrow (m1_subset_1 (k1_int_4 X0) (k1_zfmisc_1 (k2_zfmisc_1 k4_numbers k4_numbers))) \quad (6)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(r8_relat_2 X0 X1) \Leftrightarrow (\forall X2. \\ \forall X3.\forall X4.((X2 \in X1) \wedge ((X3 \in X1) \wedge ((X4 \in X1) \wedge ((k4_tarski \\ X2 X3 \in X0) \wedge (k4_tarski X3 X4 \in X0)))))) \Rightarrow (k4_tarski X2 X4 \in X0))) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.k4_tarski X0 X1 = k2_tarski (k2_tarski X0 X1) (k1_tarski X0) \quad (8)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_relat_1 X0) \Rightarrow (\forall X1.(r3_relat_2 X0 X1) \Leftrightarrow (\forall X2. \\ \forall X3.((X2 \in X1) \wedge ((X3 \in X1) \wedge (k4_tarski X2 X3 \in X0))) \Rightarrow (k4_tarski \\ X3 X2 \in X0))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_int_1 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 (k1_zfmisc_1 \\ (k2_zfmisc_1 k4_numbers k4_numbers))) \Rightarrow ((X1 = k1_int_4 X0) \Leftrightarrow (\forall X2. \\ (v1_int_1 X2) \Rightarrow (\forall X3.(v1_int_1 X3) \Rightarrow ((k4_tarski X2 X3 \in X1) \Leftrightarrow \\ (r2_int_1 X2 X3 X0)))))) \end{aligned} \quad (10)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow ((v8_relat_2 X0) \Leftrightarrow (r8_relat_2 X0 (k1_relat_1 X0))) \quad (11)$$

Assume the following.

$$\forall X0.(v1_relat_1 X0) \Rightarrow ((v3_relat_2 X0) \Leftrightarrow (r3_relat_2 X0 (k1_relat_1 X0))) \quad (12)$$

Assume the following.

$$\forall X0.\forall X1.k2_tarski X0 X1 = k2_tarski X1 X0 \quad (13)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1))) \Rightarrow (v1_relat_1 X2) \quad (14)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k4_numbers) \Rightarrow (v1_int_1 X0) \quad (15)$$

Theorem 1

$$\begin{aligned} \forall X0.(v1_int_1 X0) \Rightarrow ((v1_partfun1 (k1_int_4 X0) k4_numbers) \wedge \\ ((v3_relat_2 (k1_int_4 X0)) \wedge ((v8_relat_2 (k1_int_4 X0)) \wedge (m1_subset_1 \\ (k1_int_4 X0) (k1_zfmisc_1 (k2_zfmisc_1 k4_numbers k4_numbers)))))) \end{aligned}$$