

t23_integra8

(TMS2aAK43rtQNtpmwGrtSiWLwNTZM3mmT5z)

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Let $v1_funct_1 : \iota \Rightarrow o$ 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 $k1_numbers : \iota$ be given. Let $v3_rcomp_1 : \iota \Rightarrow o$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k32_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r2_fdiff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_fdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $k1_fdiff_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_fdiff_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $k30_valued_1 : \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v4_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v5_relat_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.((v3_rcomp_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))) \Rightarrow \\ (\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 \\ k1_numbers k1_numbers)))) \Rightarrow ((r2_fdiff_1 X1 X0) \Leftrightarrow ((r1_tarski X0 \\ (k1_relset_1 k1_numbers X1)) \wedge (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow \\ ((X2 \in X0) \Rightarrow (r1_fdiff_1 X1 X2)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\ k1_numbers k1_numbers)))) \Rightarrow (\forall X1.(m1_subset_1 X1 k1_numbers) \Rightarrow \\ ((r1_fdiff_1 X0 X1) \Rightarrow ((r1_fdiff_1 (k32_valued_1 k1_numbers k1_numbers \\ X0) X1) \wedge (k1_fdiff_1 (k32_valued_1 k1_numbers k1_numbers X0) X1 = \\ k1_real_1 (k1_fdiff_1 X0 X1)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. \forall X2. ((v3_membered X1) \wedge ((v1_funct_1 \\ X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))))) \Rightarrow (k32_valued_1 \\ X0 X1 X2 = k30_valued_1 X2) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} \forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (\\ k1_relset_1 X0 X1 = k9_xtuple_0 X1) \end{aligned} \tag{4}$$

Assume the following.

$$v3_membered\ k1_numbers \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.((v3_membered\ X1)\wedge((v1_funct_1 \\ & X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1))))\Rightarrow((v1_funct_1 \\ & (k32_valued_1\ X0\ X1\ X2))\wedge(m1_subset_1\ (k32_valued_1\ X0\ X1\ X2)\ (\\ & k1_zfmisc_1\ (k2_zfmisc_1\ X0\ k1_numbers)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_funct_1\ X0)\wedge(m1_subset_1\ X0\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ k1_numbers\ k1_numbers))))\Rightarrow((v1_funct_1\ (k2_fdiff_1 \\ & X0\ X1))\wedge(m1_subset_1\ (k2_fdiff_1\ X0\ X1)\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & k1_numbers\ k1_numbers)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1\ X0)\wedge(m1_subset_1\ X0\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & k1_numbers\ k1_numbers))))\Rightarrow(\forall X1.(r2_fdiff_1\ X0\ X1)\Rightarrow(\forall X2. \\ & ((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ k1_numbers \\ & k1_numbers))))\Rightarrow((X2 = k2_fdiff_1\ X0\ X1)\Leftrightarrow((k1_relset_1\ k1_numbers \\ & X2 = X1)\wedge(\forall X3.(m1_subset_1\ X3\ k1_numbers)\Rightarrow((X3 \in X1)\Rightarrow(k1_seq_1 \\ & X2\ X3 = k1_fdiff_1\ X0\ X3)))))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v4_relat_1\ X2\ X0)\wedge(v5_relat_1\ X2\ X1)) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v1_relat_1\ X2) \end{aligned} \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1\ X0)\wedge(m1_subset_1\ X0\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & k1_numbers\ k1_numbers))))\Rightarrow(\forall X1.((v3_rcomp_1\ X1)\wedge(m1_subset_1 \\ & X1\ (k1_zfmisc_1\ k1_numbers)))\Rightarrow(((r1_tarski\ X1\ (k9_xtuple_0\ (\\ & k32_valued_1\ k1_numbers\ k1_numbers\ X0)))\wedge(r2_fdiff_1\ X0\ X1))\Rightarrow \\ & ((r2_fdiff_1\ (k32_valued_1\ k1_numbers\ k1_numbers\ X0)\ X1)\wedge(\forall X2. \\ & (m1_subset_1\ X2\ k1_numbers)\Rightarrow((X2 \in X1)\Rightarrow(k1_seq_1\ (k2_fdiff_1 \\ & (k32_valued_1\ k1_numbers\ k1_numbers\ X0)\ X1)\ X2 = k1_real_1\ (k1_fdiff_1 \\ & X0\ X2)))))) \end{aligned}$$