

t6_integr19

(TMT5mjAeuWnADfvUh2BE1PeB1RcgoA1Kdre)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. 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 $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $r1_integra5 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3_integra5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_comseq_2 : \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_tarski : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_relset_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k26_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_measure5 : \iota \Rightarrow o$ be given. Let $k9_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $k2_integra5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_relat_1 : \iota \Rightarrow o$ be given. Let $v3_valued_0 : \iota \Rightarrow o$ be given. Let $k5_relat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k24_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ 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.

$$\begin{aligned}
 & \forall X0.((\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge (m1_subset_1 \\
 & \quad X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\
 & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow \\
 & \quad (\forall X2.(m1_subset_1 X2 k1_numbers) \Rightarrow (((r1_tarski X0 (k9_xtuple_0 \\
 & \quad X1)) \wedge ((r1_integra5 X0 X1) \wedge (v1_comseq_2 (k2_partfun1 k1_numbers \\
 & \quad k1_numbers X1 X0)))) \Rightarrow ((r1_integra5 X0 (k26_valued_1 k1_numbers \\
 & \quad k1_numbers X1 X2)) \wedge (k2_integra5 X0 (k26_valued_1 k1_numbers k1_numbers \\
 & \quad X1 X2) = k8_real_1 X2 (k2_integra5 X0 X1))))))
 \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned}
 & \forall X0. \forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2.((v1_relat_1 \\
 & X2) \wedge ((v1_funct_1 X2) \wedge (v3_valued_0 X2))) \Rightarrow ((v1_comseq_2 (k5_relat_1 \\
 & \quad X2 X0)) \Rightarrow (v1_comseq_2 (k5_relat_1 (k24_valued_1 X2 X1) X0))))
 \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (v1_xreal_0 X1) \Rightarrow (\forall X2. (v1_xreal_0 \\ & X2) \Rightarrow (\forall X3. (v1_xreal_0 X3) \Rightarrow (\forall X4. (v1_xreal_0 X4) \Rightarrow \\ & (((r1_xxreal_0 X1 X2) \wedge ((r1_xxreal_0 X2 X3) \wedge ((r1_xxreal_0 X3 X4) \wedge \\ & (r1_tarski (k3_integra5 X1 X4) X0)))) \Rightarrow (r1_tarski (k3_integra5 \\ & X2 X3) X0)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0. \forall X1. (X0 \in X1) \Rightarrow (m1_subset_1 X0 X1) \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v1_xreal_0 X0) \Rightarrow (\forall X1. (v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (\forall X3. (v1_xreal_0 X3) \Rightarrow (\forall X4. ((v1_funct_1 \\ & X4) \wedge (m1_subset_1 X4 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow \\ & (((r1_xxreal_0 X0 X1) \wedge ((r1_xxreal_0 X1 X2) \wedge ((r1_xxreal_0 X2 X3) \wedge \\ & ((r1_integra5 (k3_integra5 X0 X3) X4) \wedge ((v1_comseq_2 (k2_partfun1 \\ & k1_numbers k1_numbers X4 (k3_integra5 X0 X3))) \wedge (r1_tarski (k3_integra5 \\ & X0 X3) (k9_xtuple_0 X4)))))) \Rightarrow ((r1_integra5 (k3_integra5 X1 X2) \\ & X4) \wedge ((v1_comseq_2 (k2_partfun1 k1_numbers k1_numbers X4 (k3_integra5 \\ & X1 X2))) \wedge (r1_tarski (k3_integra5 X1 X2) (k9_xtuple_0 X4))))))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v1_funct_1 X2) \wedge \\ & (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 X0 X1)))) \Rightarrow (k2_partfun1 \\ & X0 X1 X2 X3 = k5_relat_1 X2 X3) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. \forall X3. ((v3_membered X1) \wedge \\ & (((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 X1)))) \wedge (v1_xreal_0 X3))) \Rightarrow (k26_valued_1 X0 X1 X2 X3 = k24_valued_1 \\ & X2 X3) \end{aligned} \quad (7)$$

Assume the following.

$$\forall X0. \forall X1. ((v1_relat_1 X1) \wedge (v4_relat_1 X1 X0)) \Rightarrow (k1_relset_1 X0 X1 = k9_xtuple_0 X1) \quad (8)$$

Assume the following.

$$v3_membered k1_numbers \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_xreal_0 X0) \wedge (v1_xreal_0 X1)) \Rightarrow ((\neg \\ & v1_xboole_0 (k3_integra5 X0 X1)) \wedge ((v2_measure5 (k3_integra5 \\ & X0 X1)) \wedge (m1_subset_1 (k3_integra5 X0 X1) (k1_zfmisc_1 k1_numbers)))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.((v3_membered\ X1)\wedge \\ & (((v1_funct_1\ X2)\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ X1))))\wedge(v1_xreal_0\ X3)))\Rightarrow((v1_funct_1\ (k26_valued_1\ X0\ X1 \\ & X2\ X3))\wedge(m1_subset_1\ (k26_valued_1\ X0\ X1\ X2\ X3)\ (k1_zfmisc_1\ (k2_zfmisc_1 \\ & X0\ k1_numbers)))) \end{aligned} \quad (11)$$

Assume the following.

$$\forall X0.(v1_xreal_0\ X0)\Leftrightarrow(X0 \in k1_numbers) \quad (12)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ X0\ X1)))\Rightarrow((v4_relat_1\ X2\ X0)\wedge(v5_relat_1\ X2\ X1)) \end{aligned} \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v1_relat_1\ X2) \end{aligned} \quad (14)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(v3_membered\ X1)\Rightarrow(\forall X2.(m1_subset_1 \\ & X2\ (k1_zfmisc_1\ (k2_zfmisc_1\ X0\ X1)))\Rightarrow(v3_valued_0\ X2)) \end{aligned} \quad (15)$$

Theorem 1

$$\begin{aligned} & \forall X0.(v1_xreal_0\ X0)\Rightarrow(\forall X1.(v1_xreal_0\ X1)\Rightarrow(\forall X2. \\ & (v1_xreal_0\ X2)\Rightarrow(\forall X3.(v1_xreal_0\ X3)\Rightarrow(\forall X4.(v1_xreal_0 \\ & X4)\Rightarrow(\forall X5.((v1_funct_1\ X5)\wedge(m1_subset_1\ X5\ (k1_zfmisc_1 \\ & (k2_zfmisc_1\ k1_numbers\ k1_numbers))))\Rightarrow(((r1_xxreal_0\ X0\ X1)\wedge \\ & ((r1_xxreal_0\ X1\ X2)\wedge((r1_xxreal_0\ X2\ X3)\wedge((r1_integra5\ (k3_integra5 \\ & X0\ X3)\ X5)\wedge((v1_comseq_2\ (k2_partfun1\ k1_numbers\ k1_numbers\ X5 \\ & (k3_integra5\ X0\ X3)))\wedge(r1_tarski\ (k3_integra5\ X0\ X3)\ (k1_relset_1 \\ & k1_numbers\ X5))))))\Rightarrow((r1_integra5\ (k3_integra5\ X1\ X2)\ (k26_valued_1 \\ & k1_numbers\ k1_numbers\ X5\ X4))\wedge(v1_comseq_2\ (k2_partfun1\ k1_numbers \\ & k1_numbers\ (k26_valued_1\ k1_numbers\ k1_numbers\ X5\ X4)\ (k3_integra5 \\ & X1\ X2)))))))))) \end{aligned}$$