

t43_integra9

(TMa3zaYJuSPF1xvMcq8BSRQeodc5zyo8Mkv)

October 27, 2020

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 $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_measure5 : \iota \Rightarrow o$ be given. Let $v1_partfun1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_integra5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k20_valued_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_comseq_2 : \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_integra9 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k12_integra1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_square_1 : \iota \Rightarrow \iota$ be given. Let $k6_square_1 : \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_integra9 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_square_1 : \iota \Rightarrow \iota$ be given. Let $k2_integra5 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge (m1_subset_1 \\ & \quad X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\ & ((v1_funct_2 X1 X0 k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (\\ & \quad k2_zfmisc_1 X0 k1_numbers)))))) \Rightarrow (((v1_comseq_2 (k2_partfun1 \\ & \quad X0 k1_numbers X1 X0)) \wedge (\forall X2.(m1_subset_1 X2 k1_numbers)) \Rightarrow \\ & ((X2 \in X0) \Rightarrow (r1_xxreal_0 k6_numbers (k1_seq_1 X1 X2)))))) \Rightarrow (r1_xxreal_0 \\ & \quad k6_numbers (k12_integra1 X0 X1))) \end{aligned} \tag{1}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (k7_square_1 X0 = k6_square_1 X0) \tag{2}$$

Assume the following.

$$v3_membered k1_numbers \tag{3}$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xreal_0 (k6_square_1 X0)) \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.\forall X3.\forall X4.((v3_membered \\ & X1)\wedge((v3_membered X2)\wedge(((v1_funct_1 X3)\wedge(m1_subset_1 X3 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X1))))\wedge((v1_funct_1 X4)\wedge(m1_subset_1 X4 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 X2))))))\Rightarrow((v1_funct_1 (k20_valued_1 X0 X1 X2 \\ & X3 X4)\wedge(m1_subset_1 (k20_valued_1 X0 X1 X2 X3 X4) (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 k1_numbers)))))) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0 X0)\wedge((v2_measure5 \\ & X0)\wedge(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))))\wedge(((v1_funct_1 \\ & X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))))\wedge \\ & ((v1_funct_1 X2)\wedge(m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers \\ & k1_numbers))))))\Rightarrow(m1_subset_1 (k1_integra9 X0 X1 X2) k1_numbers) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((v1_funct_1 X0)\wedge(m1_subset_1 X0 (k1_zfmisc_1 \\ & (k2_zfmisc_1 k1_numbers k1_numbers))))\wedge((\neg v1_xboole_0 X1)\wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 k1_numbers))))\Rightarrow((v1_funct_1 (k1_integra5 \\ & X0 X1))\wedge(m1_subset_1 (k1_integra5 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 \\ & X1 k1_numbers)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0)\wedge((v2_measure5 X0)\wedge(m1_subset_1 \\ & X0 (k1_zfmisc_1 k1_numbers))))\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))))\Rightarrow \\ & (k2_integra9 X0 X1 = k7_square_1 (k1_integra9 X0 X1 X1))) \end{aligned} \quad (8)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0)\Rightarrow((r1_xxreal_0 k6_numbers X0)\Rightarrow(\forall X1. \\ & (v1_xreal_0 X1)\Rightarrow((X1 = k6_square_1 X0)\Leftrightarrow((r1_xxreal_0 k6_numbers \\ & X1)\wedge(k3_square_1 X1 = X0)))) \end{aligned} \quad (9)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0)\wedge((v2_measure5 X0)\wedge(m1_subset_1 \\ & X0 (k1_zfmisc_1 k1_numbers))))\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers))))\Rightarrow \\ & (k2_integra5 X0 X1 = k12_integra1 X0 (k1_integra5 X1 X0))) \end{aligned} \quad (10)$$

Assume the following.

$$\begin{aligned}
& \forall X0.((\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge (m1_subset_1 \\
& \quad X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\
& (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k1_numbers k1_numbers)))) \Rightarrow \\
& (\forall X2.((v1_funct_1 X2) \wedge (m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad k1_numbers k1_numbers)))) \Rightarrow (k1_integra9 X0 X1 X2 = k2_integra5 \\
& \quad X0 (k20_valued_1 k1_numbers k1_numbers k1_numbers X1 X2))))
\end{aligned} \tag{11}$$

Assume the following.

$$\begin{aligned}
& \forall X0. \forall X1. \forall X2. (m1_subset_1 X2 (k1_zfmisc_1 \\
& (k2_zfmisc_1 X0 X1))) \Rightarrow ((v1_partfun1 X2 X0) \Rightarrow (v1_funct_2 X2 X0 X1))
\end{aligned} \tag{12}$$

Assume the following.

$$\begin{aligned}
& \forall X0. (v3_membered X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow \\
& \quad (v1_xreal_0 X1))
\end{aligned} \tag{13}$$

Theorem 1

$$\begin{aligned}
& \forall X0. ((v1_funct_1 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
& \quad k1_numbers k1_numbers)))) \Rightarrow (\forall X1. ((\neg v1_xboole_0 X1) \wedge (\\
& (v2_measure5 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 k1_numbers)))) \Rightarrow \\
& (((v1_partfun1 (k1_integra5 (k20_valued_1 k1_numbers k1_numbers \\
& k1_numbers X0 X0) X1) X1) \wedge ((v1_comseq_2 (k2_partfun1 X1 k1_numbers \\
& \quad (k1_integra5 (k20_valued_1 k1_numbers k1_numbers k1_numbers \\
& \quad X0 X0) X1) X1)) \wedge (\forall X2. (m1_subset_1 X2 k1_numbers) \Rightarrow ((X2 \in \\
& \quad X1) \Rightarrow (r1_xreal_0 k6_numbers (k1_seq_1 (k1_integra5 (k20_valued_1 \\
& \quad k1_numbers k1_numbers k1_numbers X0 X0) X1) X2)))))) \Rightarrow (r1_xreal_0 \\
& \quad k6_numbers (k2_integra9 X1 X0)))
\end{aligned}$$