

t10_integr16 (TMHBGRDYD- VPYP5wSLxsNS9z5Xu8semqW9Hz)

October 27, 2020

Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $v2_measure5 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_numbers : \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m1_integral : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_integr16 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m1_integr15 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_comseq_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_integr16 : \iota \Rightarrow \iota$ be given. Let $k4_complex1 : \iota \Rightarrow \iota$ be given. Let $k3_integr16 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_integr15 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_finseq_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k18_rvsum_1 : \iota \Rightarrow \iota$ be given. Let $k17_rvsum_1 : \iota \Rightarrow \iota$ be given. Let $k4_comseq_3 : \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(m2_finseq_1 X0 k2_numbers) \Rightarrow (\forall X1.(m2_finseq_1 \\ & X1 k1_numbers) \Rightarrow ((X1 = k2_integr16 X0) \Rightarrow (k18_rvsum_1 X1 = k4_complex1 \\ & (k17_rvsum_1 X0)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_funct_1 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 k2_numbers)))) \Rightarrow (k6_comseq_3 X0 X1 = k4_comseq_3 \\ & X1) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.(((\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge \\ & (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)))) \wedge ((v1_funct_1 X1) \wedge \\ & ((v1_funct_2 X1 X0 k2_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (\\ & k2_zfmisc_1 X0 k2_numbers)))))) \Rightarrow ((v1_funct_1 (k4_comseq_3 X1)) \wedge \\ & (v1_funct_2 (k4_comseq_3 X1) X0 k1_numbers)) \end{aligned} \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0 X0)\wedge((v2_measure5 \\ & X0)\wedge(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))))\wedge(((v1_funct_1 \\ & X1)\wedge((v1_funct_2 X1 X0 k2_numbers)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 k2_numbers))))))\wedge(m1_integra1 X2 X0))\Rightarrow(\forall X3. \\ & (m1_integr16 X3 X0 X1 X2)\Rightarrow(m2_finseq_1 X3 k2_numbers)) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.\forall X2.(((\neg v1_xboole_0 X0)\wedge((v2_measure5 \\ & X0)\wedge(m1_subset_1 X0 (k1_zfmisc_1 k1_numbers))))\wedge(((v1_funct_1 \\ & X1)\wedge((v1_funct_2 X1 X0 k1_numbers)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 k1_numbers))))))\wedge(m1_integra1 X2 X0))\Rightarrow(\forall X3. \\ & (m1_integr15 X3 X0 X1 X2)\Rightarrow(m2_finseq_1 X3 k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$\begin{aligned} & \forall X0.\forall X1.((v1_funct_1 X1)\wedge(m1_subset_1 X1 (k1_zfmisc_1 \\ & (k2_zfmisc_1 X0 k2_numbers))))\Rightarrow((v1_funct_1 (k6_comseq_3 X0 \\ & X1))\wedge(m1_subset_1 (k6_comseq_3 X0 X1) (k1_zfmisc_1 (k2_zfmisc_1 \\ & X0 k1_numbers)))) \end{aligned} \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0)\wedge((v2_measure5 X0)\wedge(m1_subset_1 \\ & X0 (k1_zfmisc_1 k1_numbers))))\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge \\ & ((v1_funct_2 X1 X0 k2_numbers)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (\\ & k2_zfmisc_1 X0 k2_numbers))))))\Rightarrow(\forall X2.(m1_integra1 X2 X0)\Rightarrow \\ & (\forall X3.(m1_integr16 X3 X0 X1 X2)\Rightarrow(k3_integr16 X0 X1 X2 X3 = k17_rvsum_1 \\ & X3)))) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0)\wedge((v2_measure5 X0)\wedge(m1_subset_1 \\ & X0 (k1_zfmisc_1 k1_numbers))))\Rightarrow(\forall X1.((v1_funct_1 X1)\wedge \\ & ((v1_funct_2 X1 X0 k1_numbers)\wedge(m1_subset_1 X1 (k1_zfmisc_1 (\\ & k2_zfmisc_1 X0 k1_numbers))))))\Rightarrow(\forall X2.(m1_integra1 X2 X0)\Rightarrow \\ & (\forall X3.(m1_integr15 X3 X0 X1 X2)\Rightarrow(k1_integr15 X0 X1 X2 X3 = k18_rvsum_1 \\ & X3)))) \end{aligned} \quad (8)$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge (m1_subset_1 \\ & X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\ & ((v1_funct_2 X1 X0 k2_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (\\ & k2_zfmisc_1 X0 k2_numbers)))))) \Rightarrow (\forall X2.(m1_integra1 X2 X0) \Rightarrow \\ & (\forall X3.(m1_integr16 X3 X0 X1 X2) \Rightarrow (\forall X4.(m1_integr15 \\ & X4 X0 (k6_comseq_3 X0 X1) X2) \Rightarrow ((X4 = k2_integr16 X3) \Rightarrow (k4_complex1 \\ & (k3_integr16 X0 X1 X2 X3) = k1_integr15 X0 (k6_comseq_3 X0 X1) X2 X4)))))) \end{aligned}$$