

t10_integra4

(TMN8H3DR3tDjk77bEHbUgN6sre3NdzzdmGq)

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 $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_comseq_2 : \iota \Rightarrow o$ be given. Let $k2_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_integral1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v2_integral1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v4_xxreal_2 : \iota \Rightarrow o$ be given. Let $k1_rvsum_1 : \iota \Rightarrow \iota$ be given. Let $k9_integral1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_xxreal_2 : \iota \Rightarrow o$ be given. Let $k8_integral1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge (m1_subset_1 \\ & \quad X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\ & \quad ((v1_funct_2 X1 X0 k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (\\ & \quad k2_zfmisc_1 X0 k1_numbers)))))) \Rightarrow ((v1_comseq_2 (k2_partfun1 X0 \\ & \quad k1_numbers X1 X0)) \Rightarrow (v4_xxreal_2 (k1_rvsum_1 (k9_integral1 X0 X1)))))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge (m1_subset_1 \\ & \quad X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\ & \quad ((v1_funct_2 X1 X0 k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (\\ & \quad k2_zfmisc_1 X0 k1_numbers)))))) \Rightarrow ((v1_comseq_2 (k2_partfun1 X0 \\ & \quad k1_numbers X1 X0)) \Rightarrow (v3_xxreal_2 (k1_rvsum_1 (k8_integral1 X0 X1)))))) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge (m1_subset_1 \\ & \quad X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\ & \quad (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))) \Rightarrow \\ & \quad ((v2_integral1 X1 X0) \Leftrightarrow (v4_xxreal_2 (k1_rvsum_1 (k9_integral1 X0 \\ & \quad X1)))))) \end{aligned} \quad (3)$$

Assume the following.

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge (m1_subset_1 \\ & \quad X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\ & (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 X0 k1_numbers)))) \Rightarrow \quad (4) \\ & ((v1_integra1 X1 X0) \Leftrightarrow (v3_xxreal_2 (k1_rsum_1 (k8_integra1 X0 \\ & \quad X1)))))) \end{aligned}$$

Theorem 1

$$\begin{aligned} & \forall X0.((\neg v1_xboole_0 X0) \wedge ((v2_measure5 X0) \wedge (m1_subset_1 \\ & \quad X0 (k1_zfmisc_1 k1_numbers)))) \Rightarrow (\forall X1.((v1_funct_1 X1) \wedge \\ & ((v1_funct_2 X1 X0 k1_numbers) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (\\ & \quad k2_zfmisc_1 X0 k1_numbers)))))) \Rightarrow ((v1_comseq_2 (k2_partfun1 X0 \\ & \quad k1_numbers X1 X0)) \Rightarrow ((v1_integra1 X1 X0) \wedge (v2_integra1 X1 X0))) \end{aligned}$$