

t18_asympt_0

(TMVsXWJgm9WCa3KzhKgJzzCkLqtywy1FXWh)

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Let $v1_funct_1 : \iota \Rightarrow o$ be given. Let $v1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k1_numbers : \iota$ be given. Let $v2_asympt_0 : \iota \Rightarrow o$ 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 $k7_asympt_0 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $m1_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $m2_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k9_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ 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 $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\neg v1_xboole_0 \ k1_numbers \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 \ X1) \wedge (m1_funct_2 \\ & \ X2 \ X0 \ X1)) \Rightarrow (\forall X3. (m2_funct_2 \ X3 \ X0 \ X1 \ X2) \Rightarrow ((v1_funct_1 \ X3) \wedge \\ & ((v1_funct_2 \ X3 \ X0 \ X1) \wedge (m1_subset_1 \ X3 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \\ & \ X0 \ X1)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0. \forall X1. (\neg v1_xboole_0 \ X1) \Rightarrow (m1_funct_2 \ (k9_funct_2 \ X0 \ X1) \ X0 \ X1) \tag{3}$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_funct_1 \ X0) \wedge ((v1_funct_2 \ X0 \ k5_numbers \ k1_numbers) \wedge \\ & (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k1_numbers)))) \Rightarrow \\ & ((v2_asympt_0 \ X0) \Leftrightarrow (\exists X1. (m2_subset_1 \ X1 \ k1_numbers \ k5_numbers) \wedge \\ & (\forall X2. (m2_subset_1 \ X2 \ k1_numbers \ k5_numbers) \Rightarrow ((r1_xxreal_0 \\ & \ X1 \ X2) \Rightarrow (r1_xxreal_0 \ k6_numbers \ (k1_seq_1 \ X0 \ X2)))))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned}
& \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\
& ((v2_asympt_0 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
& k5_numbers k1_numbers)))))) \Rightarrow (k7_asympt_0 X0 = ReplSep (toset \\
& (\lambda X1 : \iota. m2_funct_2 X1 k5_numbers k1_numbers (k9_funct_2 \\
& k5_numbers k1_numbers))) (\lambda X1 : \iota. \exists X2. (m1_subset_1 \\
& X2 k1_numbers) \wedge (\exists X3. (m2_subset_1 X3 k1_numbers k5_numbers) \wedge \\
& (\neg r1_xxreal_0 X2 k6_numbers) \wedge (\forall X4. (m2_subset_1 X4 k1_numbers \\
& k5_numbers) \Rightarrow ((r1_xxreal_0 X3 X4) \Rightarrow ((r1_xxreal_0 (k8_real_1 X2 \\
& (k1_seq_1 X0 X4)) (k1_seq_1 X1 X4)) \wedge (r1_xxreal_0 k6_numbers (k1_seq_1 \\
& X1 X4))))))))) (\lambda X1 : \iota. X1))
\end{aligned} \tag{5}$$

Theorem 1

$$\begin{aligned}
& \forall X0. \forall X1. ((v1_funct_1 X1) \wedge ((v1_funct_2 X1 k5_numbers \\
& k1_numbers) \wedge ((v2_asympt_0 X1) \wedge (m1_subset_1 X1 (k1_zfmisc_1 \\
& (k2_zfmisc_1 k5_numbers k1_numbers)))))) \Rightarrow ((X0 \in k7_asympt_0 \\
& X1) \Rightarrow ((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k1_numbers) \wedge \\
& ((v2_asympt_0 X0) \wedge (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 \\
& k5_numbers k1_numbers)))))))))
\end{aligned}$$