

t34_topreala

(TMZ4PfBpRkfxeuzxFkzfbxEPn4KcHijFCo)

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Let $v3_tops_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k2_topreala : \iota$ be given. Let $k2_borsuk_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_topmetr : \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ 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 $u1_struct_0 : \iota \Rightarrow \iota$ 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 $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_tarski : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_finseq_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k10_finseq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0. ((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (u1_struct_0 (k2_borsuk_1 \\ & \quad k3_topmetr k3_topmetr)) (u1_struct_0 (k15_euclid np_2))) \wedge \\ & \quad m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (k2_borsuk_1 \\ & \quad k3_topmetr k3_topmetr)) (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow \\ & \quad ((\forall X1. (m1_subset_1 X1 k1_numbers) \Rightarrow (\forall X2. (m1_subset_1 \\ & \quad X2 k1_numbers) \Rightarrow (k1_funct_1 X0 (k4_tarski X1 X2) = k2_finseq_4 k1_numbers \\ & \quad X1 X2))) \Rightarrow (v3_tops_2 X0 (k2_borsuk_1 k3_topmetr k3_topmetr) (k15_euclid \\ & \quad np_2)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. ((\neg v1_xboole_0 X0) \wedge ((m1_subset_1 \\ & \quad X1 X0) \wedge (m1_subset_1 X2 X0))) \Rightarrow (k2_finseq_4 X0 X1 X2 = k10_finseq_1 \\ & \quad X1 X2) \end{aligned} \tag{2}$$

Assume the following.

$$\neg v1_xboole_0 k1_numbers \tag{3}$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 k2_topreala) \wedge ((v1_funct_2 k2_topreala (u1_struct_0 \\ & \quad (k2_borsuk_1 k3_topmetr k3_topmetr)) (u1_struct_0 (k15_euclid \\ & \quad np_2))) \wedge (m1_subset_1 k2_topreala (k1_zfmisc_1 (k2_zfmisc_1 \\ & \quad (u1_struct_0 (k2_borsuk_1 k3_topmetr k3_topmetr)) (u1_struct_0 \\ & \quad (k15_euclid np_2)))))) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (u1_struct_0 (k2_borsuk_1 \\ & \quad k3_topmetr k3_topmetr)) (u1_struct_0 (k15_euclid np_2)))) \wedge (\\ & m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 (k2_borsuk_1 \\ & \quad k3_topmetr k3_topmetr)) (u1_struct_0 (k15_euclid np_2)))))) \Rightarrow \\ & ((X0 = k2_topreala) \Leftrightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (k1_funct_1 X0 (k4_tarski X1 X2) = k10_finseq_1 \\ & \quad X1 X2)))))) \end{aligned} \tag{5}$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \tag{6}$$

Theorem 1

$$v3_tops_2 k2_topreala (k2_borsuk_1 k3_topmetr k3_topmetr) (k15_euclid np_2)$$