

l86_borsuk_7 (TMStqndNGPNMJVSgLh- sLjY5LwvZfVpirqT2)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k12_borsuk_7 : \iota$ be given. Let $k4_euclid_5 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_partfun1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_numbers : \iota$ be given. Let $k1_fcont_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k32_sin_cos : \iota$ be given. Let $c1_borsuk_7 : \iota$ be given. Let $k19_sin_cos : \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k16_sin_cos : \iota$ be given. Let $k20_sin_cos : \iota \Rightarrow \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k17_sin_cos : \iota \Rightarrow \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k21_sin_cos : \iota \Rightarrow \iota$ be given. Let $k18_sin_cos : \iota \Rightarrow \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ 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 $k3_topmetr : \iota$ be given. Let $k8_toprealb : \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $k2_zfmisc_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (k20_sin_cos (k2_xcmplx_0 (k3_xcmplx_0 X0 X1) \\ & X2) = k1_funct_1 (k1_partfun1 k1_numbers k1_numbers k1_numbers \\ & k1_numbers (k1_fcont_1 X0 X2) k19_sin_cos) X1))) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (\forall X2. \\ & (v1_xreal_0 X2) \Rightarrow (k17_sin_cos (k2_xcmplx_0 (k3_xcmplx_0 X0 X1) \\ & X2) = k1_funct_1 (k1_partfun1 k1_numbers k1_numbers k1_numbers \\ & k1_numbers (k1_fcont_1 X0 X2) k16_sin_cos) X1))) \end{aligned} \quad (2)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k2_xcmplx_0 X0 k6_numbers = X0) \quad (4)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \text{ np_2}) \wedge (m2_subset_1 \text{ np_2 } k1_numbers \text{ k5_numbers})) \wedge \\ & ((m1_subset_1 \text{ np_2 } k5_numbers) \wedge (m1_subset_1 \text{ np_2 } k1_numbers)) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 X0 \text{ k1_numbers}) \wedge (v1_xreal_0 X1)) \Rightarrow (k8_real_1 X0 X1 = k3_xcmplx_0 X0 X1) \quad (6)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (7)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (8)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 \text{ k1_numbers}) \Rightarrow (k21_sin_cos X0 = k20_sin_cos X0) \quad (9)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 \text{ k1_numbers}) \Rightarrow (k18_sin_cos X0 = k17_sin_cos X0) \quad (10)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 X0 \text{ k1_numbers}) \wedge (v1_xreal_0 X1)) \Rightarrow (m1_subset_1 (k8_real_1 X0 X1) \text{ k1_numbers}) \quad (11)$$

Assume the following.

$$m1_subset_1 \text{ k5_numbers } (k1_zfmisc_1 \text{ k1_numbers}) \quad (12)$$

Assume the following.

$$m1_subset_1 \text{ k32_sin_cos } k1_numbers \quad (13)$$

Assume the following.

$$\begin{aligned} & (v1_funct_1 \text{ k12_borsuk_7}) \wedge ((v1_funct_2 \text{ k12_borsuk_7 } (u1_struct_0 \\ & \text{ k3_topmetr}) (u1_struct_0 (k8_toprealb \text{ np_3}))) \wedge (m1_subset_1 \\ & \text{ k12_borsuk_7 } (k1_zfmisc_1 (k2_zfmisc_1 (u1_struct_0 \text{ k3_topmetr}) \\ & (u1_struct_0 (k8_toprealb \text{ np_3})))))) \end{aligned} \quad (14)$$

Assume the following.

$$c1_borsuk_7 = k6_numbers \quad (15)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 (u1_struct_0 k3_topmetr) \\ (u1_struct_0 (k8_toprealb np_3))) \wedge (m1_subset_1 X0 (k1_zfmisc_1 \\ (k2_zfmisc_1 (u1_struct_0 k3_topmetr) (u1_struct_0 (k8_toprealb \\ np_3)))))) \Rightarrow ((X0 = k12_borsuk_7) \Leftrightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow \\ (k1_funct_1 X0 X1 = k4_euclid_5 (k21_sin_cos (k8_real_1 (k8_real_1 \\ np_2 k32_sin_cos) X1)) (k18_sin_cos (k8_real_1 (k8_real_1 np_2 \\ k32_sin_cos) X1)) k6_numbers))) \end{aligned} \quad (16)$$

Assume the following.

$$\forall X0. \forall X1. ((m1_subset_1 X0 k1_numbers) \wedge (v1_xreal_0 X1)) \Rightarrow (k8_real_1 X0 X1 = k8_real_1 X1 X0) \quad (17)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 (k1_zfmisc_1 k1_numbers)) \Rightarrow (v3_membered X0) \quad (18)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xreal_0 X0) \quad (19)$$

Assume the following.

$$\forall X0. (m1_subset_1 X0 k1_numbers) \Rightarrow (v1_xcmplx_0 X0) \quad (20)$$

Assume the following.

$$\forall X0. (v3_membered X0) \Rightarrow (\forall X1. (m1_subset_1 X1 X0) \Rightarrow (v1_xreal_0 X1)) \quad (21)$$

Theorem 1

$$\begin{aligned} \forall X0. (v1_xreal_0 X0) \Rightarrow (k1_funct_1 k12_borsuk_7 X0 = k4_euclid_5 \\ (k1_funct_1 (k1_partfun1 k1_numbers k1_numbers k1_numbers k1_numbers \\ (k1_fcont_1 (k8_real_1 np_2 k32_sin_cos) c1_borsuk_7) k19_sin_cos) \\ X0) (k1_funct_1 (k1_partfun1 k1_numbers k1_numbers k1_numbers \\ k1_numbers (k1_fcont_1 (k8_real_1 np_2 k32_sin_cos) k6_numbers) \\ k16_sin_cos) X0) k6_numbers) \end{aligned}$$