

t66_mathmorp
(TMR5zXDPsfcNMN9GQgkjrJBkBDKzGMGChvm)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $u1_struct_0 : \iota \Rightarrow \iota$ be given. Let $k15_euclid : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k6_mathmorp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k5_mathmorp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_mathmorp : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_rusub_4 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_ordinal1 : \iota$ be given. Let $v6_membered : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $v2_struct_0 : \iota \Rightarrow o$ be given. Let $v5_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_rlvect_1 : \iota \Rightarrow o$ be given. Let $l2_algstr_0 : \iota \Rightarrow o$ be given. Let $l1_rltopsp1 : \iota \Rightarrow o$ be given. Let $l1_pre_topc : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 k5_numbers) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ & X1)))) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 \\ & (k15_euclid X1)))) \Rightarrow ((X0 \neq k6_numbers) \Rightarrow (k6_mathmorp X0 (k15_euclid \\ & X1) (k3_mathmorp (k15_euclid X1) X2 X3) = k3_mathmorp (k15_euclid \\ & X1) (k6_mathmorp X0 (k15_euclid X1) X2) (k6_mathmorp X0 (k15_euclid \\ & X1) X3)))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 k5_numbers) \Rightarrow \\ & (\forall X2.(m1_subset_1 X2 (k1_zfmisc_1 (u1_struct_0 (k15_euclid \\ & X1)))) \Rightarrow (\forall X3.(m1_subset_1 X3 (k1_zfmisc_1 (u1_struct_0 \\ & (k15_euclid X1)))) \Rightarrow (k6_mathmorp X0 (k15_euclid X1) (k6_rusub_4 \\ & (k15_euclid X1) X2 X3) = k6_rusub_4 (k15_euclid X1) (k6_mathmorp \\ & X0 (k15_euclid X1) X2) (k6_mathmorp X0 (k15_euclid X1) X3)))))) \end{aligned} \tag{2}$$

Assume the following.

$$k5_numbers = k4_ordinal1 \tag{3}$$

Assume the following.

$$v6_membered k4_ordinal1 \tag{4}$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((\neg v2_struct_0\ (k15_euclid\ X0))\wedge (v5_rltopsp1\ (k15_euclid\ X0))) \quad (5)$$

Assume the following.

$$\forall X0.(l1_rlvect_1\ X0)\Rightarrow(l2_algstr_0\ X0) \quad (6)$$

Assume the following.

$$\forall X0.(l1_rltopsp1\ X0)\Rightarrow((l1_rlvect_1\ X0)\wedge(l1_pre_topc\ X0)) \quad (7)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.(((\neg v2_struct_0\ X0)\wedge(l2_algstr_0\ X0))\wedge((m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ X0)))))\Rightarrow(m1_subset_1\ (k6_rusub_4\ X0\ X1\ X2)\ (k1_zfmisc_1\ (u1_struct_0\ X0))) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.\forall X2.((v1_xreal_0\ X0)\wedge(((\neg v2_struct_0\ X1)\wedge(l1_rlvect_1\ X1))\wedge(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ X1)))))\Rightarrow(m1_subset_1\ (k6_mathmorp\ X0\ X1\ X2)\ (k1_zfmisc_1\ (u1_struct_0\ X1))) \quad (9)$$

Assume the following.

$$\forall X0.(v7_ordinal1\ X0)\Rightarrow((v5_rltopsp1\ (k15_euclid\ X0))\wedge (l1_rltopsp1\ (k15_euclid\ X0))) \quad (10)$$

Assume the following.

$$\forall X0.((\neg v2_struct_0\ X0)\wedge(l2_algstr_0\ X0))\Rightarrow(\forall X1.(m1_subset_1\ X1\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ X0)))\Rightarrow(k5_mathmorp\ X0\ X1\ X2 = k3_mathmorp\ X0\ (k6_rusub_4\ X0\ X1\ X2)\ X2))) \quad (11)$$

Assume the following.

$$\forall X0.(v6_membered\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ X0)\Rightarrow (v7_ordinal1\ X1)) \quad (12)$$

Theorem 1

$$\forall X0.(v1_xreal_0\ X0)\Rightarrow(\forall X1.(m1_subset_1\ X1\ k5_numbers)\Rightarrow(\forall X2.(m1_subset_1\ X2\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ X1))))\Rightarrow(\forall X3.(m1_subset_1\ X3\ (k1_zfmisc_1\ (u1_struct_0\ (k15_euclid\ X1))))\Rightarrow((X0\neq k6_numbers)\Rightarrow(k6_mathmorp\ X0\ (k15_euclid\ X1)\ (k5_mathmorp\ (k15_euclid\ X1)\ X2\ X3) = k5_mathmorp\ (k15_euclid\ X1)\ (k6_mathmorp\ X0\ (k15_euclid\ X1)\ X2)\ (k6_mathmorp\ X0\ (k15_euclid\ X1)\ X3))))))$$