

t56_mesfunc5

(TMQc3qmFyerrKpUic3X1HSfjb66TUKFwtHi)

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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 $k7_numbers : \iota$ 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 $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k8_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_supinf_2 : \iota \Rightarrow \iota$ be given. Let $k17_supinf_2 : \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k10_xtuple_0 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Let $k1_xxreal_2 : \iota \Rightarrow \iota$ be given. Let $k1_funct_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v4_card_3 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v7_ordinal1 X0) \Rightarrow (\forall X1.(\neg v1_xboole_0 X1) \Rightarrow (\\ \forall X2.((v1_funct_1 X2) \wedge ((v1_funct_2 X2 k5_numbers X1) \wedge (\\ m1_subset_1 X2 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers X1)))))) \Rightarrow \\ (k8_nat_1 X1 X2 X0 \in k10_xtuple_0 X2))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v2_membered X1) \Rightarrow ((\\ X0 \in X1) \Rightarrow (r1_xxreal_0 X0 (k1_xxreal_2 X1)))) \quad (2)$$

Assume the following.

$$\forall X0.(v2_membered X0) \Rightarrow (k8_supinf_2 X0 = k1_xxreal_2 X0) \quad (3)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.(((v1_funct_1 X1) \wedge ((v1_funct_2 \\ X1 k5_numbers X0) \wedge (m1_subset_1 X1 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers \\ X0)))))) \wedge (v7_ordinal1 X2)) \Rightarrow (k8_nat_1 X0 X1 X2 = k1_funct_1 X1 X2) \end{aligned} \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 k5_numbers k7_numbers) \wedge \\ (m1_subset_1 X0 (k1_zfmisc_1 (k2_zfmisc_1 k5_numbers k7_numbers)))))) \Rightarrow \\ (k17_supinf_2 X0 = k10_xtuple_0 X0) \end{aligned} \quad (5)$$

Assume the following.

$$\neg v1_xboole_0 \ k7_numbers \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. \forall X2. (((v1_funct_1 \ X1) \wedge ((v1_funct_2 \\ & X1 \ k5_numbers \ X0) \wedge (m1_subset_1 \ X1 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \\ & X0)))))) \wedge (v7_ordinal1 \ X2)) \Rightarrow (m1_subset_1 \ (k8_nat_1 \ X0 \ X1 \ X2) \ X0) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. ((v1_funct_1 \ X0) \wedge ((v1_funct_2 \ X0 \ k5_numbers \ k7_numbers) \wedge \\ & (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k7_numbers)))))) \Rightarrow \\ & ((\neg v1_xboole_0 \ (k17_supinf_2 \ X0)) \wedge ((v4_card_3 \ (k17_supinf_2 \\ & X0)) \wedge (m1_subset_1 \ (k17_supinf_2 \ X0) \ (k1_zfmisc_1 \ k7_numbers)))) \end{aligned} \quad (8)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ k7_numbers)) \Rightarrow (v2_membered \ X0) \quad (9)$$

Assume the following.

$$\forall X0. (m1_subset_1 \ X0 \ k7_numbers) \Rightarrow (v1_xxreal_0 \ X0) \quad (10)$$

Theorem 1

$$\begin{aligned} & \forall X0. ((v1_funct_1 \ X0) \wedge ((v1_funct_2 \ X0 \ k5_numbers \ k7_numbers) \wedge \\ & (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k7_numbers)))))) \Rightarrow \\ & (\forall X1. (v7_ordinal1 \ X1) \Rightarrow (r1_xxreal_0 \ (k8_nat_1 \ k7_numbers \\ & X0 \ X1) \ (k8_supinf_2 \ (k17_supinf_2 \ X0)))) \end{aligned}$$