

t13_mesfunc7

(TMFf5XYEtqmDiGJnfcJz9PTqatFHGGqKHvs)

October 27, 2020

Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k4_mesfunc7 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_supinf_1 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k7_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $k4_ordinal1 : \iota$ be given. Let $k1_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_extreal1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $k1_xxreal_0 : \iota$ be given. Let $k4_xxreal_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $v3_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_zfmisc_1 : \iota \Rightarrow \iota$ be given. Let $k2_xxreal_0 : \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(m1_subset_1 X0 k7_numbers) \Rightarrow (k4_mesfunc7 X0 np_1 = X0) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 k6_numbers = k6_numbers) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (((r1_xxreal_0 X0 X1) \wedge (v2_xxreal_0 X0)) \Rightarrow (v2_xxreal_0 X1))) \quad (4)$$

Assume the following.

$$m1_subset_1 k1_xboole_0 k4_ordinal1 \quad (5)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k7_numbers) \Rightarrow (\forall X1.(v7_ordinal1 X1) \Rightarrow (k4_mesfunc7 X0 (k1_nat_1 X1 np_1) = k1_extreal1 (k4_mesfunc7 X0 X1) X0)) \quad (6)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0 : \iota \Rightarrow o. ((X0 \ np_1) \wedge (\forall X1. ((\neg v1_xboole_0 \\ & X1) \wedge (v7_ordinal1 \ X1)) \Rightarrow ((X0 \ X1) \Rightarrow (X0 \ (k1_nat_1 \ X1 \ np_1)))) \Rightarrow (\\ & \forall X1. ((\neg v1_xboole_0 \ X1) \wedge (v7_ordinal1 \ X1)) \Rightarrow (X0 \ X1)) \end{aligned} \quad (8)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (9)$$

Assume the following.

$$k5_numbers = k4_ordinal1 \quad (10)$$

Assume the following.

$$k1_supinf_1 = k1_xxreal_0 \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1_subset_1 \ X0 \ k7_numbers) \wedge (m1_subset_1 \\ & X1 \ k7_numbers)) \Rightarrow (k1_extreal1 \ X0 \ X1 = k4_xxreal_3 \ X0 \ X1) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \exists X0. (v1_xcmplx_0 \ X0) \wedge ((v1_xxreal_0 \ X0) \wedge ((v3_xxreal_0 \\ & X0) \wedge (v1_xreal_0 \ X0))) \end{aligned} \quad (13)$$

Assume the following.

$$v2_xxreal_0 \ k1_xxreal_0 \quad (14)$$

Assume the following.

$$\neg v1_xreal_0 \ k1_xxreal_0 \quad (15)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. (((\neg v2_xxreal_0 \ X0) \wedge (v1_xreal_0 \ X0)) \wedge \\ & ((\neg v3_xxreal_0 \ X1) \wedge (v1_xreal_0 \ X1))) \Rightarrow (\neg v2_xxreal_0 \ (k3_xcmplx_0 \\ & X0 \ X1)) \end{aligned} \quad (16)$$

Assume the following.

$$v1_xxreal_0 \ k1_xxreal_0 \quad (17)$$

Assume the following.

$$m1_subset_1 \ k5_numbers \ (k1_zfmisc_1 \ k1_numbers) \quad (18)$$

Assume the following.

$$m1_subset_1 \ k1_supinf_1 \ k7_numbers \quad (19)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xxreal_0 \ X0) \Rightarrow (\forall X1.(v1_xxreal_0 \ X1) \Rightarrow (\forall X2. \\ (v1_xxreal_0 \ X2) \Rightarrow (((v1_xreal_0 \ X0) \wedge (v1_xreal_0 \ X1)) \Rightarrow ((X2 = \\ k4_xxreal_3 \ X0 \ X1) \Leftrightarrow (\exists X3.(v1_xcmplx_0 \ X3) \wedge (\exists X4. \\ (v1_xcmplx_0 \ X4) \wedge ((X0 = X3) \wedge ((X1 = X4) \wedge (X2 = k3_xcmplx_0 \ X3 \ X4))))))) \wedge \\ (((\neg(\neg(v1_xreal_0 \ X0) \wedge (v1_xreal_0 \ X1)) \wedge (((v2_xxreal_0 \ X0) \wedge \\ (v2_xxreal_0 \ X1)) \vee ((v3_xxreal_0 \ X0) \wedge (v3_xxreal_0 \ X1)))) \wedge (\neg(\\ X2 = k4_xxreal_3 \ X0 \ X1) \Leftrightarrow (X2 = k1_xxreal_0))) \wedge (\neg(\neg(v1_xreal_0 \\ X0) \wedge (v1_xreal_0 \ X1)) \wedge (((v2_xxreal_0 \ X0) \wedge (v3_xxreal_0 \ X1)) \vee \\ ((v3_xxreal_0 \ X0) \wedge (v2_xxreal_0 \ X1)))) \wedge (\neg(X2 = k4_xxreal_3 \ X0 \ X1) \Leftrightarrow \\ (X2 = k2_xxreal_0))) \wedge (\neg(\neg(v1_xreal_0 \ X0) \wedge (v1_xreal_0 \ X1)) \wedge \\ ((\neg(\neg(v1_xreal_0 \ X0) \wedge (v1_xreal_0 \ X1)) \wedge (((v2_xxreal_0 \ X0) \wedge \\ (v2_xxreal_0 \ X1)) \vee ((v3_xxreal_0 \ X0) \wedge (v3_xxreal_0 \ X1)))) \wedge (\neg \\ (\neg(v1_xreal_0 \ X0) \wedge (v1_xreal_0 \ X1)) \wedge (((v2_xxreal_0 \ X0) \wedge (v3_xxreal_0 \\ X1)) \vee ((v3_xxreal_0 \ X0) \wedge (v2_xxreal_0 \ X1)))) \wedge (\neg(X2 = k4_xxreal_3 \\ X0 \ X1) \Leftrightarrow (X2 = k6_numbers)))))))))) \end{aligned} \quad (20)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ (k1_zfmisc_1 \ k1_numbers)) \Rightarrow (v3_membered \ X0) \quad (21)$$

Assume the following.

$$\forall X0.((v1_xxreal_0 \ X0) \wedge (v3_xxreal_0 \ X0)) \Rightarrow ((\neg v1_xboole_0 \ X0) \wedge ((v1_xxreal_0 \ X0) \wedge (\neg v2_xxreal_0 \ X0))) \quad (22)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k5_numbers) \Rightarrow (\neg v3_xxreal_0 \ X0) \quad (23)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (v1_xreal_0 \ X0) \quad (24)$$

Assume the following.

$$\forall X0.(v3_membered \ X0) \Rightarrow (\forall X1.(m1_subset_1 \ X1 \ X0) \Rightarrow (v1_xreal_0 \ X1)) \quad (25)$$

Theorem 1

$$\forall X0.(v7_ordinal1 \ X0) \Rightarrow ((r1_xxreal_0 \ np_1 \ X0) \Rightarrow (k4_mesfunc7 \ k1_supinf_1 \ X0 = k1_supinf_1))$$