

t52_mesfunc5 (TM-
NUQ9m6uNDRSsgQHkCFooELE9oUbBntv6X)

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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 $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Let $k8_nat_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v7_mesfunc5 : \iota \Rightarrow o$ be given. Let $k2_mesfunc5 : \iota \Rightarrow \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_xxreal_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_xxreal_3 : \iota \Rightarrow \iota$ be given. Let $k6_numbers : \iota$ be given. Let $k3_extreal1 : \iota \Rightarrow \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k4_supinf_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_xxreal_3 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_measure6 : \iota \Rightarrow \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $v10_mesfunc5 : \iota \Rightarrow o$ be given. Let $k1_supinf_1 : \iota$ be given. Let $v8_mesfunc5 : \iota \Rightarrow o$ be given. Let $k2_supinf_1 : \iota$ be given. Let $v9_mesfunc5 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (k1_xxreal_3 X0 (k2_xxreal_3 X0) = k6_numbers) \quad (1)$$

Assume the following.

$$\forall X0.(m1_subset_1 X0 k7_numbers) \Rightarrow ((X0 = k6_numbers) \Leftrightarrow (k3_extreal1 X0 = k6_numbers)) \quad (2)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (3)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 X0 k7_numbers) \wedge (m1_subset_1 X1 k7_numbers)) \Rightarrow (k4_supinf_2 X0 X1 = k3_xxreal_3 X0 X1) \quad (4)$$

Assume the following.

$$\exists X0.(\neg v1_xboole_0 X0) \wedge (v7_ordinal1 X0) \quad (5)$$

Assume the following.

$$v1_xboole_0 \ k1_xboole_0 \quad (6)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 \ X0) \Rightarrow (m1_subset_1 \ (k1_measure6 \ X0) \ k7_numbers) \quad (7)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_funct_1 \ X0) \wedge ((v1_funct_2 \ X0 \ k5_numbers \ k7_numbers) \wedge \\ (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k7_numbers)))) \Rightarrow \\ ((v7_mesfunc5 \ X0) \Leftrightarrow (\exists X1.(v1_xxreal_0 \ X1) \wedge (\forall X2.(\\ v1_xxreal_0 \ X2) \Rightarrow (\neg(\neg r1_xxreal_0 \ X2 \ k6_numbers) \wedge (\forall X3.(\\ v7_ordinal1 \ X3) \Rightarrow (\exists X4.(v7_ordinal1 \ X4) \wedge ((r1_xxreal_0 \\ X3 \ X4) \wedge (r1_xxreal_0 \ X2 \ (k3_extreal1 \ (k4_supinf_2 \ (k8_nat_1 \ k7_numbers \\ X0 \ X4) \ (k1_measure6 \ X1))))))))))) \quad (8) \end{aligned}$$

Assume the following.

$$\forall X0.(v1_xxreal_0 \ X0) \Rightarrow (\forall X1.(v1_xxreal_0 \ X1) \Rightarrow (k3_xxreal_3 \\ X0 \ X1 = k1_xxreal_3 \ X0 \ (k2_xxreal_3 \ X1))) \quad (9)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 \ X0) \Rightarrow (k1_measure6 \ X0 = X0) \quad (10)$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_funct_1 \ X0) \wedge ((v1_funct_2 \ X0 \ k5_numbers \ k7_numbers) \wedge \\ (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k7_numbers)))) \Rightarrow \\ ((v10_mesfunc5 \ X0) \Rightarrow (\forall X1.(m1_subset_1 \ X1 \ k7_numbers) \Rightarrow \\ ((X1 = k2_mesfunc5 \ X0) \Leftrightarrow (\neg(\forall X2.(v1_xxreal_0 \ X2) \Rightarrow (\neg(X1 = X2) \wedge \\ ((\forall X3.(v1_xxreal_0 \ X3) \Rightarrow (\neg(\neg r1_xxreal_0 \ X3 \ k6_numbers) \wedge \\ (\forall X4.(v7_ordinal1 \ X4) \Rightarrow (\exists X5.(v7_ordinal1 \ X5) \wedge (\\ (r1_xxreal_0 \ X4 \ X5) \wedge (r1_xxreal_0 \ X3 \ (k3_extreal1 \ (k4_supinf_2 \\ (k8_nat_1 \ k7_numbers \ X0 \ X5) \ X1)))))) \wedge (v7_mesfunc5 \ X0)))) \wedge (\\ (\neg(X1 = k1_supinf_1) \wedge (v8_mesfunc5 \ X0) \wedge (\neg(X1 = k2_supinf_1) \wedge \\ (v9_mesfunc5 \ X0))))))) \quad (11) \end{aligned}$$

Assume the following.

$$\begin{aligned} \forall X0.((v1_funct_1 \ X0) \wedge ((v1_funct_2 \ X0 \ k5_numbers \ k7_numbers) \wedge \\ (m1_subset_1 \ X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k7_numbers)))) \Rightarrow \\ ((v10_mesfunc5 \ X0) \Leftrightarrow (\neg(\neg v7_mesfunc5 \ X0) \wedge (\neg v8_mesfunc5 \ X0) \wedge \\ (\neg v9_mesfunc5 \ X0)))) \quad (12) \end{aligned}$$

Assume the following.

$$\forall X0.(v1_xboole_0 \ X0) \Rightarrow (v7_ordinal1 \ X0) \quad (13)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xxreal_0 X0) \quad (14)$$

Assume the following.

$$\forall X0.(v7_ordinal1 X0) \Rightarrow (v1_xxreal_0 X0) \quad (15)$$

Theorem 1

$$\begin{aligned} & \forall X0.((v1_funct_1 X0) \wedge ((v1_funct_2 X0 \ k5_numbers \ k7_numbers) \wedge \\ & (m1_subset_1 X0 \ (k1_zfmisc_1 \ (k2_zfmisc_1 \ k5_numbers \ k7_numbers)))))) \Rightarrow \\ & (\forall X1.(v1_xreal_0 X1) \Rightarrow ((\forall X2.(v7_ordinal1 X2) \Rightarrow (\\ & k8_nat_1 \ k7_numbers \ X0 \ X2 = X1)) \Rightarrow ((v7_mesfunc5 X0) \wedge (k2_mesfunc5 \\ & X0 = X1)))) \end{aligned}$$