

t1_fdifff_6

(TMdwGRi2FoeNpUjtznmUqThcbU667pwk3F)

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Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k24_sin_cos : \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k6_power : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k8_power : \iota$ be given. Let $k10_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $k9_prepower : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k25_sin_cos : \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $np_1 : \iota$ be given. Let $k5_power : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $v2_xxreal_0 : \iota \Rightarrow o$ be given. Let $m2_subset_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k5_numbers : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $np_0 : \iota$ be given. Let $k7_power : \iota$ be given. Let $k1_xboole_0 : \iota$ be given. Let $k11_arytm_3 : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k1_xxreal_0 : \iota$ be given. Let $v7_ordinal1 : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\forall X1.(v1_xreal_0 X1) \Rightarrow (k9_prepower (k25_sin_cos X0) X1 = k25_sin_cos (k3_xcmplx_0 X1 X0))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 np_1 X0 = X0) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((\neg r1_xxreal_0 X0 k6_numbers) \Rightarrow (k25_sin_cos (k5_power k8_power X0) = X0)) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (k6_power k8_power (k1_seq_1 k24_sin_cos X0) = X0) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (k5_power k8_power (k25_sin_cos X0) = X0) \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xreal_0 \ np_1) \wedge (m2_subset_1 \ np_1 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_1 \ k5_numbers) \wedge (m1_subset_1 \ np_1 \ k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

$$v1_xboole_0 \ np_0 \quad (7)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1_subset_1 \ X0 \ k1_numbers) \wedge (v1_xreal_0 \\ & \ X1)) \Rightarrow (k8_real_1 \ X0 \ X1 = k3_xcmplx_0 \ X0 \ X1) \end{aligned} \quad (8)$$

Assume the following.

$$k8_power = k7_power \quad (9)$$

Assume the following.

$$k6_numbers = k1_xboole_0 \quad (10)$$

Assume the following.

$$k11_arytm_3 = k1_xboole_0 \quad (11)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1_subset_1 \ X0 \ k1_numbers) \wedge (m1_subset_1 \\ & \ X1 \ k1_numbers)) \Rightarrow (k10_prepower \ X0 \ X1 = k9_prepower \ X0 \ X1) \end{aligned} \quad (12)$$

Assume the following.

$$\begin{aligned} & \exists X0. (v1_xboole_0 \ X0) \wedge ((v1_xcmplx_0 \ X0) \wedge ((v1_xreal_0 \\ & \ X0) \wedge (v1_xreal_0 \ X0))) \end{aligned} \quad (13)$$

Assume the following.

$$k1_seq_1 \ k24_sin_cos \ k6_numbers = np_1 \quad (14)$$

Assume the following.

$$\forall X0. (v1_xboole_0 \ X0) \Rightarrow (X0 = k1_xboole_0) \quad (15)$$

Assume the following.

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

Assume the following.

$$\forall X0. (v1_xreal_0 \ X0) \Rightarrow (v1_xreal_0 \ (k25_sin_cos \ X0)) \quad (17)$$

Assume the following.

$$\neg v1_xreal_0 \ k1_xxreal_0 \quad (18)$$

Assume the following.

$$\forall X0.\forall X1.((m1_subset_1 \ X0 \ k1_numbers) \wedge (v1_xreal_0 \ X1)) \Rightarrow (m1_subset_1 \ (k8_real_1 \ X0 \ X1) \ k1_numbers) \quad (19)$$

Assume the following.

$$v1_xreal_0 \ k7_power \quad (20)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xreal_0 \ X0) \wedge (v1_xreal_0 \ X1)) \Rightarrow (v1_xreal_0 \ (k5_power \ X0 \ X1)) \quad (21)$$

Assume the following.

$$k1_xxreal_0 = k1_numbers \quad (22)$$

Assume the following.

$$\forall X0.(v1_xreal_0 \ X0) \Rightarrow (k25_sin_cos \ X0 = k1_seq_1 \ k24_sin_cos \ X0) \quad (23)$$

Assume the following.

$$\forall X0.(v1_xreal_0 \ X0) \Leftrightarrow (X0 \in k1_numbers) \quad (24)$$

Assume the following.

$$\forall X0.\forall X1.((\neg v1_xboole_0 \ X0) \Rightarrow ((m1_subset_1 \ X1 \ X0) \Leftrightarrow (X1 \in X0))) \wedge ((v1_xboole_0 \ X0) \Rightarrow ((m1_subset_1 \ X1 \ X0) \Leftrightarrow (v1_xboole_0 \ X1))) \quad (25)$$

Assume the following.

$$\forall X0.(v1_xboole_0 \ X0) \Rightarrow (v7_ordinal1 \ X0) \quad (26)$$

Assume the following.

$$\forall X0.(v1_xreal_0 \ X0) \Rightarrow (v1_xcmplx_0 \ X0) \quad (27)$$

Assume the following.

$$\forall X0.(v7_ordinal1 \ X0) \Rightarrow (v1_xreal_0 \ X0) \quad (28)$$

Assume the following.

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (v1_xreal_0 \ X0) \quad (29)$$

Theorem 1

$$\forall X0.(m1_subset_1 \ X0 \ k1_numbers) \Rightarrow (\forall X1.(m1_subset_1 \ X1 \ k1_numbers) \Rightarrow ((\neg r1_xxreal_0 \ X0 \ k6_numbers) \Rightarrow (k1_seq_1 \ k24_sin_cos \ (k8_real_1 \ X1 \ (k6_power \ k8_power \ X0)) = k10_prepower \ X0 \ X1)))$$