

t17_comp trig
(TMd7AQM1w5WVV CBNFUo5zD5LFp7R7pWQfEV)

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Let $v1_xreal_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k8_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np_2 : \iota$ be given. Let $k32_sin_cos : \iota$ be given. Let $k17_sin_cos : \iota \Rightarrow \iota$ be given. Let $k2_rcomp_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_seq_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k16_sin_cos : \iota$ be given. Let $v1_xboole_0 : \iota \Rightarrow o$ be given. Let $k1_xboole_0 : \iota$ be given. Let $v1_xxreal_0 : \iota \Rightarrow o$ be given. Let $k4_xxreal_1 : \iota \Rightarrow \iota \Rightarrow \iota$ 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 $k1_numbers : \iota$ be given. Let $k5_numbers : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $np_0 : \iota$ be given. Let $k31_sin_cos : \iota$ be given. Let $v3_membered : \iota \Rightarrow o$ be given. Let $v2_membered : \iota \Rightarrow o$ be given. Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\neg(X0 \in k2_rcomp_1 k32_sin_cos (k8_real_1 np_2 k32_sin_cos)) \wedge (r1_xxreal_0 k6_numbers (k1_seq_1 k16_sin_cos X0))) \quad (1)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\neg(X0 \in k2_rcomp_1 k6_numbers k32_sin_cos) \wedge (r1_xxreal_0 (k1_seq_1 k16_sin_cos X0) k6_numbers)) \quad (2)$$

Assume the following.

$$\forall X0.(v1_xboole_0 X0) \Rightarrow (X0 = k1_xboole_0) \quad (3)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow (\forall X2.(v1_xxreal_0 X2) \Rightarrow ((X0 \in k4_xxreal_1 X1 X2) \Leftrightarrow ((\neg r1_xxreal_0 X0 X1) \wedge (\neg r1_xxreal_0 X2 X0))))) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xxreal_0 X0) \Rightarrow (\forall X1.(v1_xxreal_0 X1) \Rightarrow ((r1_xxreal_0 X0 X1) \wedge (r1_xxreal_0 X1 X0)) \Rightarrow (X0 = X1)) \quad (5)$$

Assume the following.

$$\begin{aligned} & ((v2_xxreal_0 \ np_2) \wedge (m2_subset_1 \ np_2 \ k1_numbers \ k5_numbers)) \wedge \\ & ((m1_subset_1 \ np_2 \ k5_numbers) \wedge (m1_subset_1 \ np_2 \ k1_numbers)) \end{aligned} \quad (6)$$

Assume the following.

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

Assume the following.

$$r1_xxreal_0 \ np_0 \ np_0 \quad (8)$$

Assume the following.

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

Assume the following.

$$k32_sin_cos = k31_sin_cos \quad (10)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((v1_xxreal_0 \ X0) \wedge (v1_xxreal_0 \ X1)) \Rightarrow (\\ & k2_rcomp_1 \ X0 \ X1 = k4_xxreal_1 \ X0 \ X1) \end{aligned} \quad (11)$$

Assume the following.

$$\exists X0. (v1_xboole_0 \ X0) \wedge (v1_xxreal_0 \ X0) \quad (12)$$

Assume the following.

$$v3_membered \ k1_numbers \quad (13)$$

Assume the following.

$$\begin{aligned} & \forall X0. \forall X1. ((m1_subset_1 \ X0 \ k1_numbers) \wedge (v1_xreal_0 \\ & X1)) \Rightarrow (m1_subset_1 \ (k8_real_1 \ X0 \ X1) \ k1_numbers) \end{aligned} \quad (14)$$

Assume the following.

$$v1_xreal_0 \ k31_sin_cos \quad (15)$$

Assume the following.

$$\forall X0. (v1_xreal_0 \ X0) \Rightarrow (k17_sin_cos \ X0 = k1_seq_1 \ k16_sin_cos \ X0) \quad (16)$$

Assume the following.

$$\forall X0. (v1_xreal_0 \ X0) \Rightarrow (v1_xxreal_0 \ X0) \quad (17)$$

Assume the following.

$$\forall X0. (v3_membered \ X0) \Rightarrow (v2_membered \ X0) \quad (18)$$

Assume the following.

$$\begin{aligned} & \forall X0. (v2_membered \ X0) \Rightarrow (\forall X1. (m1_subset_1 \ X1 \ X0) \Rightarrow \\ & (v1_xxreal_0 \ X1)) \end{aligned} \quad (19)$$

Theorem 1

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (\neg(r1_xxreal_0 k6_numbers X0) \wedge ((\neg r1_xxreal_0 (k8_real_1 np_2 k32_sin_cos) X0) \wedge ((k17_sin_cos X0 = k6_numbers) \wedge ((X0 \neq k6_numbers) \wedge (X0 \neq k32_sin_cos)))))$$