

t34_comp trig

(TMErdJwLWgozZv9K19ZCwVdh5gPUii9UTjf)

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Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $r1_xxreal_0 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k6_numbers : \iota$ be given. Let $k1_comp trig : \iota \Rightarrow \iota$ 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 $k17_complex1 : \iota \Rightarrow \iota$ be given. Let $k6_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k10_real_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k1_real_1 : \iota \Rightarrow \iota$ be given. Let $np_3 : \iota$ be given. Let $m1_subset_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1_numbers : \iota$ be given. Let $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k21_sin_cos : \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k18_sin_cos : \iota \Rightarrow \iota$ be given. Let $k7_complex1 : \iota$ be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow ((\\ & \neg(X0 \neq X1) \wedge (r1_xxreal_0 (k17_complex1 (k6_xcmplx_0 X0 X1)) k6_numbers)) \wedge \\ & (\neg(\neg r1_xxreal_0 (k17_complex1 (k6_xcmplx_0 X0 X1)) k6_numbers) \wedge \\ & (X0 = X1)))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(v1_xcmplx_0 X1) \Rightarrow ((\\ & k17_complex1 (k6_xcmplx_0 X0 X1) = k6_numbers) \Leftrightarrow (X0 = X1))) \end{aligned} \tag{2}$$

Assume the following.

$$\begin{aligned} & (\neg r1_xxreal_0 (k10_real_1 k32_sin_cos np_2) k6_numbers) \wedge ((\\ & \neg r1_xxreal_0 k32_sin_cos (k10_real_1 k32_sin_cos np_2)) \wedge ((\\ & \neg r1_xxreal_0 k32_sin_cos k6_numbers) \wedge ((\neg r1_xxreal_0 (k10_real_1 \\ & k32_sin_cos np_2) (k1_real_1 (k10_real_1 k32_sin_cos np_2))) \wedge \\ & ((\neg r1_xxreal_0 (k8_real_1 np_2 k32_sin_cos) k32_sin_cos) \wedge (\\ & (\neg r1_xxreal_0 (k8_real_1 (k10_real_1 np_3 np_2) k32_sin_cos) \\ & (k10_real_1 k32_sin_cos np_2)) \wedge ((\neg r1_xxreal_0 k6_numbers (\\ & k1_real_1 (k10_real_1 k32_sin_cos np_2))) \wedge ((\neg r1_xxreal_0 (\\ & k8_real_1 np_2 k32_sin_cos) k6_numbers) \wedge ((\neg r1_xxreal_0 (k8_real_1 \\ & (k10_real_1 np_3 np_2) k32_sin_cos) k32_sin_cos) \wedge ((\neg r1_xxreal_0 \\ & (k8_real_1 np_2 k32_sin_cos) (k8_real_1 (k10_real_1 np_3 np_2) \\ & k32_sin_cos)) \wedge (\neg r1_xxreal_0 (k8_real_1 (k10_real_1 np_3 np_2) \\ & k32_sin_cos) k6_numbers)))))))))) \end{aligned} \tag{3}$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k6_xcmplx_0 X0 X0 = k6_numbers) \quad (4)$$

Assume the following.

$$m1_subset_1 k6_numbers k1_numbers \quad (5)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (m1_subset_1 (k1_comptrig X0) k1_numbers) \quad (6)$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1_xcmplx_0 X0) \Rightarrow (\forall X1.(m1_subset_1 X1 k1_numbers) \Rightarrow \\ & (((X0 \neq k6_numbers) \Rightarrow ((X1 = k1_comptrig X0) \Leftrightarrow ((X0 = k2_xcmplx_0 (\\ & k8_real_1 (k17_complex1 X0) (k21_sin_cos X1)) (k3_xcmplx_0 (k8_real_1 \\ & (k17_complex1 X0) (k18_sin_cos X1)) k7_complex1)) \wedge ((r1_xxreal_0 \\ & k6_numbers X1) \wedge (\neg r1_xxreal_0 (k8_real_1 np_2 k32_sin_cos) X1)))))) \wedge \\ & ((X0 = k6_numbers) \Rightarrow ((X1 = k1_comptrig X0) \Leftrightarrow (X1 = k6_numbers)))) \end{aligned} \quad (7)$$

Theorem 1

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow ((r1_xxreal_0 k6_numbers (k1_comptrig X0)) \wedge (\neg r1_xxreal_0 (k8_real_1 np_2 k32_sin_cos) (k1_comptrig X0)))$$