

t103_sin_cos6 (TMMADQfrNJWoqDNF- peistvs3H2MBZQUHpQu)

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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 $k2_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3_square_1 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k18_sin_cos : \iota \Rightarrow \iota$ be given. Let $k6_sin_cos6 : \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow & ((\neg(\neg r1_xxreal_0 k6_numbers X0) \wedge \\ & (r1_xxreal_0 (k4_xcmplx_0 X0) k6_numbers)) \wedge (\neg(\neg r1_xxreal_0 \\ & (k4_xcmplx_0 X0) k6_numbers) \wedge (r1_xxreal_0 k6_numbers X0))) \end{aligned} \quad (1)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_square_1 X0 = k3_square_1 (k4_xcmplx_0 X0)) \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow & (\forall X1.(v1_xreal_0 X1) \Rightarrow (((r1_xxreal_0 \\ & k6_numbers X0) \wedge (k2_xcmplx_0 (k3_square_1 X1) (k3_square_1 X0) = \\ & np_1)) \Rightarrow (k18_sin_cos (k6_sin_cos6 X1) = X0))) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k4_xcmplx_0 (k4_xcmplx_0 X0) = X0) \quad (4)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow ((v1_xcmplx_0 (k4_xcmplx_0 X0)) \wedge (v1_xreal_0 (k4_xcmplx_0 X0))) \quad (5)$$

Assume the following.

$$\forall X0.(v1_xreal_0 X0) \Rightarrow (v1_xcmplx_0 X0) \quad (6)$$

Theorem 1

$$\begin{aligned} \forall X0.(v1_xreal_0 X0) \Rightarrow & (\forall X1.(v1_xreal_0 X1) \Rightarrow (((r1_xxreal_0 \\ & X0 k6_numbers) \wedge (k2_xcmplx_0 (k3_square_1 X1) (k3_square_1 X0) = \\ & np_1)) \Rightarrow (k18_sin_cos (k6_sin_cos6 X1) = k4_xcmplx_0 X0))) \end{aligned}$$