

t18_sin_cos3
(TMFfirgJZE2ZkRXdwHwd1jvtnzpQ5kErkSin)

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Let $v1_xcmplx_0 : \iota \Rightarrow o$ be given. Let $k10_funct_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k2_numbers : \iota$ be given. Let $k4_sin_cos3 : \iota$ be given. Let $k5_binop_2 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k7_complex1 : \iota$ be given. Let $k2_sin_cos3 : \iota$ be given. Let $k1_binop_2 : \iota \Rightarrow \iota$ be given. Let $k3_xcmplx_0 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k4_xcmplx_0 : \iota \Rightarrow \iota$ be given. Let $np_1 : \iota$ be given. Let $k1_xcmplx_0 : \iota$ be given. Assume the following.

$$\begin{aligned} \forall X0.(v1_xcmplx_0 X0) \Rightarrow & (k10_funct_2 k2_numbers k2_numbers \\ k2_sin_cos3 X0 = & k10_funct_2 k2_numbers k2_numbers k2_sin_cos3 \\ & (k1_binop_2 X0)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1_xcmplx_0 X0) \Rightarrow & (k10_funct_2 k2_numbers k2_numbers \\ k2_sin_cos3 (k5_binop_2 k7_complex1 X0) = & k10_funct_2 k2_numbers \\ & k2_numbers k4_sin_cos3 X0) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.\forall X2.((v1_xcmplx_0 X0) \wedge & ((v1_xcmplx_0 \\ X1) \wedge (v1_xcmplx_0 X2))) \Rightarrow & (k3_xcmplx_0 (k3_xcmplx_0 X0 X1) X2 = k3_xcmplx_0 \\ & X0 (k3_xcmplx_0 X1 X2)) \end{aligned} \quad (3)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0) \Rightarrow (k3_xcmplx_0 X0 (k4_xcmplx_0 np_1) = k4_xcmplx_0 X0) \quad (4)$$

Assume the following.

$$k3_xcmplx_0 k1_xcmplx_0 k1_xcmplx_0 = k4_xcmplx_0 np_1 \quad (5)$$

Assume the following.

$$k7_complex1 = k1_xcmplx_0 \quad (6)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k5_binop_2 X0 X1 = k3_xcmplx_0 X0 X1) \quad (7)$$

Assume the following.

$$\forall X0.(v1_xcmplx_0 X0)\Rightarrow(k1_binop_2 X0 = k4_xcmplx_0 X0) \quad (8)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(v1_xcmplx_0 (k3_xcmplx_0 X0 X1)) \quad (9)$$

Assume the following.

$$v1_xcmplx_0 k1_xcmplx_0 \quad (10)$$

Assume the following.

$$\forall X0.\forall X1.((v1_xcmplx_0 X0)\wedge(v1_xcmplx_0 X1))\Rightarrow(k5_binop_2 X0 X1 = k5_binop_2 X1 X0) \quad (11)$$

Theorem 1

$$\forall X0.(v1_xcmplx_0 X0)\Rightarrow(k10_funct_2 k2_numbers k2_numbers k4_sin_cos3 (k5_binop_2 k7_complex1 X0) = k10_funct_2 k2_numbers k2_numbers k2_sin_cos3 X0)$$