

## t37\_sin\_cos3

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Let  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $k15\_sin\_cos : \iota \Rightarrow \iota$  be given. Let  $k1\_binop\_2 : \iota \Rightarrow \iota$  be given. Let  $k5\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k7\_complex1 : \iota$  be given. Let  $k4\_binop\_2 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k10\_funct\_2 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k2\_numbers : \iota$  be given. Let  $k2\_sin\_cos3 : \iota$  be given. Let  $k1\_sin\_cos3 : \iota$  be given. Let  $m1\_subset\_1 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k4\_sin\_cos3 : \iota$  be given. Let  $k3\_sin\_cos3 : \iota$  be given. Assume the following.

$$\begin{aligned} \forall X0.(m1\_subset\_1 X0 k2\_numbers) \Rightarrow (k15\_sin\_cos (k1\_binop\_2 \\ X0) = k4\_binop\_2 (k10\_funct\_2 k2\_numbers k2\_numbers k4\_sin\_cos3 \\ X0) (k10\_funct\_2 k2\_numbers k2\_numbers k3\_sin\_cos3 X0)) \end{aligned} \quad (1)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k10\_funct\_2 k2\_numbers k2\_numbers \\ k4\_sin\_cos3 (k5\_binop\_2 k7\_complex1 X0) = k10\_funct\_2 k2\_numbers \\ k2\_numbers k2\_sin\_cos3 X0) \end{aligned} \quad (2)$$

Assume the following.

$$\begin{aligned} \forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k10\_funct\_2 k2\_numbers k2\_numbers \\ k3\_sin\_cos3 (k5\_binop\_2 k7\_complex1 X0) = k5\_binop\_2 k7\_complex1 \\ (k10\_funct\_2 k2\_numbers k2\_numbers k1\_sin\_cos3 X0)) \end{aligned} \quad (3)$$

Assume the following.

$$m1\_subset\_1 k7\_complex1 k2\_numbers \quad (4)$$

Assume the following.

$$\begin{aligned} \forall X0.\forall X1.((v1\_xcmplx\_0 X0) \wedge (v1\_xcmplx\_0 X1)) \Rightarrow ( \\ m1\_subset\_1 (k5\_binop\_2 X0 X1) k2\_numbers) \end{aligned} \quad (5)$$

Assume the following.

$$\forall X0.(m1\_subset\_1 X0 k2\_numbers) \Rightarrow (v1\_xcmplx\_0 X0) \quad (6)$$

**Theorem 1**

$$\forall X0.(v1\_xcmplx\_0 X0) \Rightarrow (k15\_sin\_cos (k1\_binop\_2 (k5\_binop\_2 k7\_complex1 X0)) = k4\_binop\_2 (k10\_funct\_2 k2\_numbers k2\_numbers k2\_sin\_cos3 X0) (k5\_binop\_2 k7\_complex1 (k10\_funct\_2 k2\_numbers k2\_numbers k1\_sin\_cos3 X0)))$$