

## l12\_sin\_cos6

(TMdsyi6thK1FV8wyCNXytPQ5tspi7LSp7uq)

October 27, 2020

Let  $r1\_xxreal\_0 : \iota \Rightarrow \iota \Rightarrow o$  be given. Let  $k10\_real\_1 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $k32\_sin\_cos : \iota$  be given. Let  $np\_1 : \iota$  be given. Let  $np\_2 : \iota$  be given. Let  $v1\_xreal\_0 : \iota \Rightarrow o$  be given. Let  $k6\_numbers : \iota$  be given. Let  $k7\_xcmplx\_0 : \iota \Rightarrow \iota \Rightarrow \iota$  be given. Let  $v1\_xboole\_0 : \iota \Rightarrow o$  be given. Let  $v2\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $v3\_xxreal\_0 : \iota \Rightarrow o$  be given. Let  $k1\_xboole\_0 : \iota$  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  $v1\_xcmplx\_0 : \iota \Rightarrow o$  be given. Let  $v1\_xxreal\_0 : \iota \Rightarrow o$  be given. Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow (\forall X2. \\ & (v1\_xreal\_0 X2) \Rightarrow (\neg(\neg r1\_xxreal\_0 X0 k6\_numbers) \wedge ((\neg r1\_xxreal\_0 \\ & X1 k6\_numbers) \wedge ((\neg r1\_xxreal\_0 X2 X1) \wedge (r1\_xxreal\_0 (k7\_xcmplx\_0 \\ & X0 X1) (k7\_xcmplx\_0 X0 X2))))))) \end{aligned} \tag{1}$$

Assume the following.

$$\begin{aligned} & \forall X0.(v1\_xreal\_0 X0) \Rightarrow (\forall X1.(v1\_xreal\_0 X1) \Rightarrow ((r1\_xxreal\_0 \\ & X0 X1) \Rightarrow ((v1\_xboole\_0 X0) \vee ((v2\_xxreal\_0 X1) \vee (v3\_xxreal\_0 X0)))))) \end{aligned} \tag{2}$$

Assume the following.

$$\forall X0.(v1\_xboole\_0 X0) \Rightarrow (X0 = k1\_xboole\_0) \tag{3}$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_2) \wedge (m2\_subset\_1 np\_2 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_2 k5\_numbers) \wedge (m1\_subset\_1 np\_2 k1\_numbers)) \end{aligned} \tag{4}$$

Assume the following.

$$\begin{aligned} & ((v2\_xxreal\_0 np\_1) \wedge (m2\_subset\_1 np\_1 k1\_numbers k5\_numbers)) \wedge \\ & ((m1\_subset\_1 np\_1 k5\_numbers) \wedge (m1\_subset\_1 np\_1 k1\_numbers)) \end{aligned} \tag{5}$$

Assume the following.

$$v1\_xboole\_0 np\_0 \tag{6}$$

Assume the following.

$$\neg r1\_xxreal\_0 \ np\_2 \ np\_1 \tag{7}$$

Assume the following.

$$\neg r1\_xxreal\_0 \ np\_1 \ np\_0 \tag{8}$$

Assume the following.

$$k6\_numbers = k1\_xboole\_0 \tag{9}$$

Assume the following.

$$k32\_sin\_cos = k31\_sin\_cos \tag{10}$$

Assume the following.

$$\forall X0. \forall X1. ((m1\_subset\_1 \ X0 \ k1\_numbers) \wedge (v1\_xreal\_0 \ X1)) \Rightarrow (k10\_real\_1 \ X0 \ X1 = k7\_xcmplx\_0 \ X0 \ X1) \tag{11}$$

Assume the following.

$$\exists X0. (v1\_xboole\_0 \ X0) \wedge ((v1\_xcmplx\_0 \ X0) \wedge ((v1\_xxreal\_0 \ X0) \wedge (v1\_xreal\_0 \ X0))) \tag{12}$$

Assume the following.

$$(v1\_xreal\_0 \ k31\_sin\_cos) \wedge (v2\_xxreal\_0 \ k31\_sin\_cos) \tag{13}$$

Assume the following.

$$m1\_subset\_1 \ k32\_sin\_cos \ k1\_numbers \tag{14}$$

Assume the following.

$$\forall X0. (v1\_xreal\_0 \ X0) \Rightarrow (v1\_xxreal\_0 \ X0) \tag{15}$$

Assume the following.

$$\forall X0. ((v1\_xxreal\_0 \ X0) \wedge (v2\_xxreal\_0 \ X0)) \Rightarrow ((\neg v1\_xboole\_0 \ X0) \wedge ((v1\_xxreal\_0 \ X0) \wedge (\neg v3\_xxreal\_0 \ X0))) \tag{16}$$

Assume the following.

$$\forall X0. (m1\_subset\_1 \ X0 \ k1\_numbers) \Rightarrow (v1\_xreal\_0 \ X0) \tag{17}$$

**Theorem 1**

$$\neg r1\_xxreal\_0 \ (k10\_real\_1 \ k32\_sin\_cos \ np\_1) \ (k10\_real\_1 \ k32\_sin\_cos \ np\_2)$$